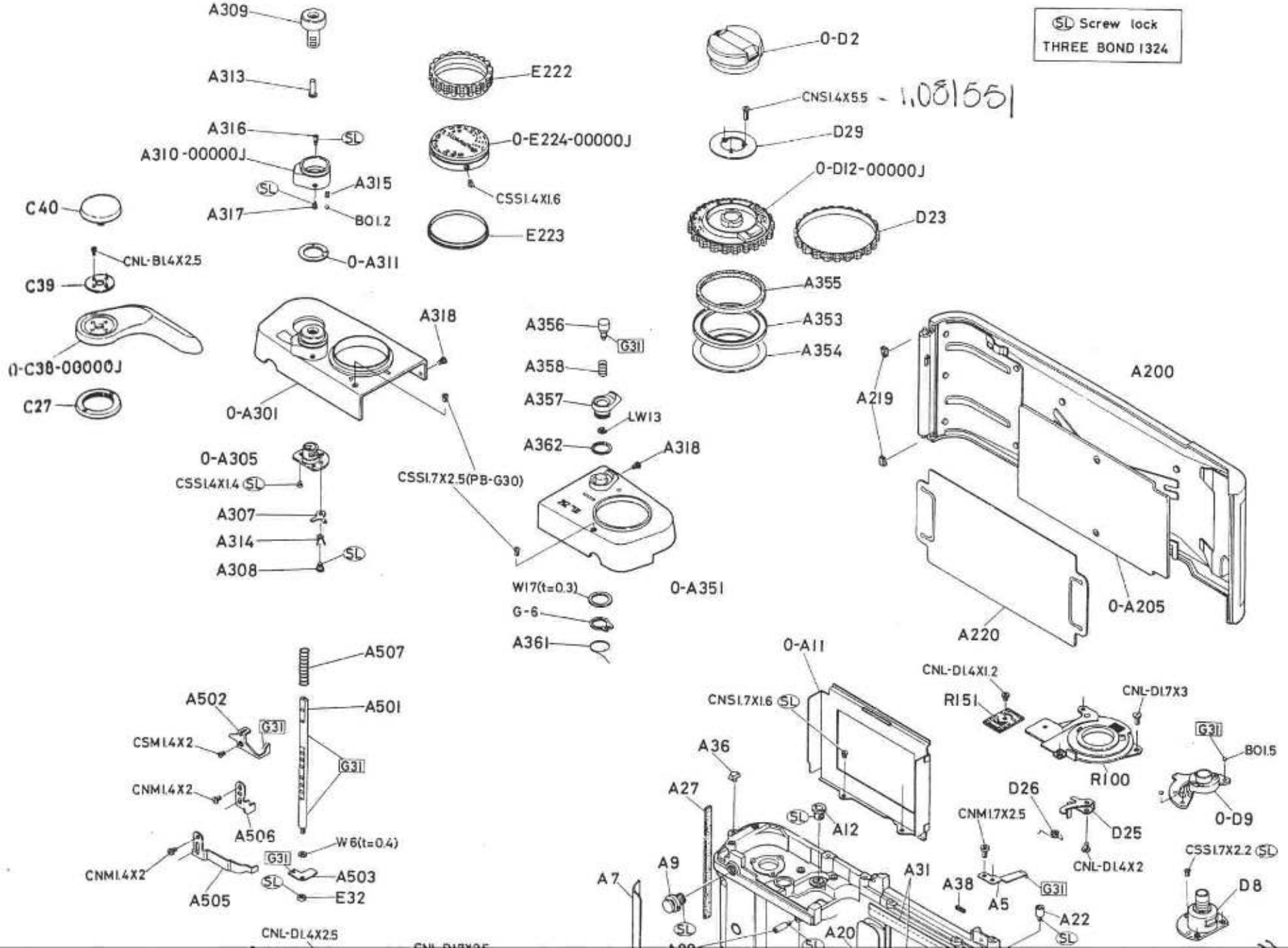
PRODUCT No.24000

PENTAX LX

EXPLODED ILLUSTRATION



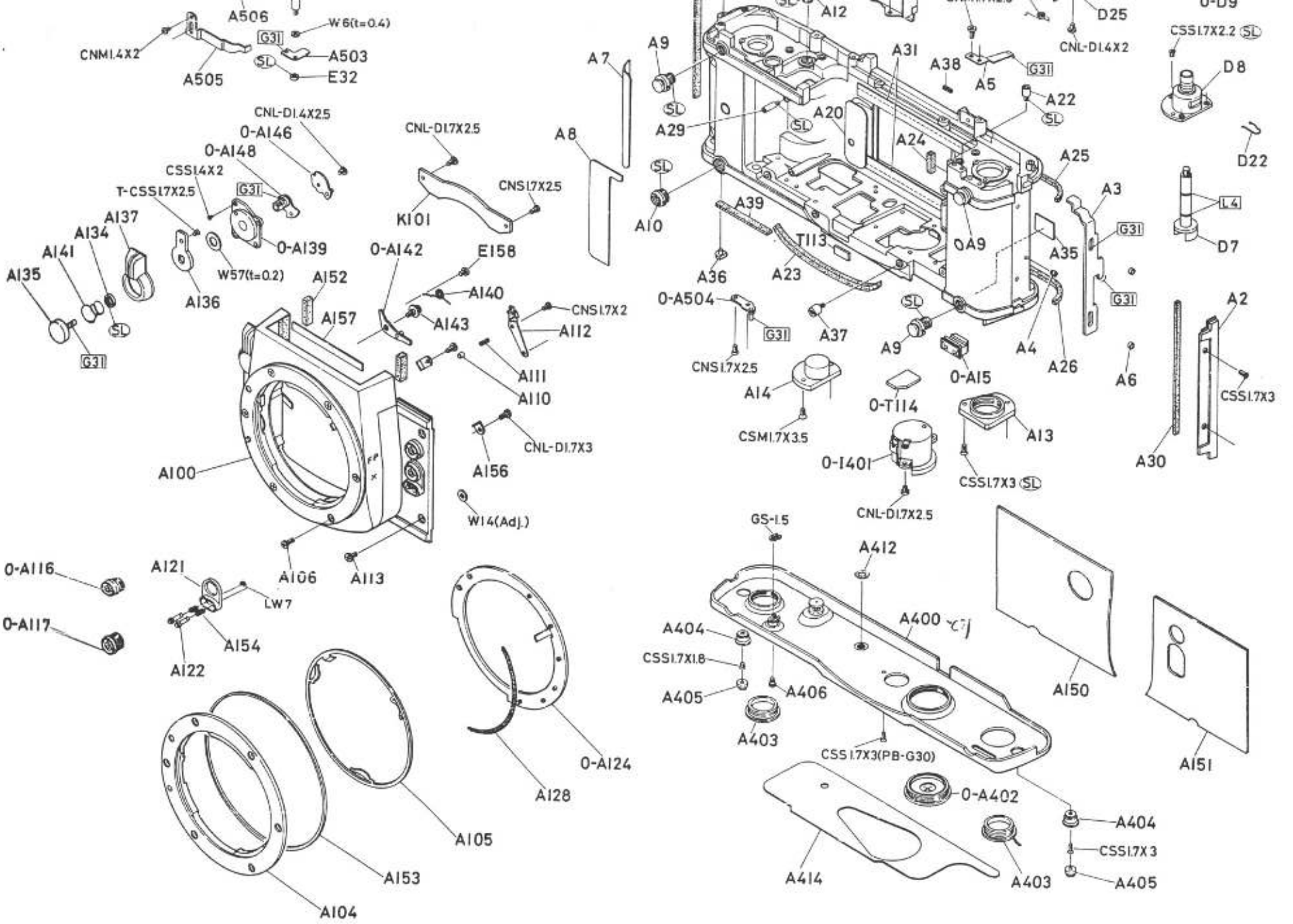


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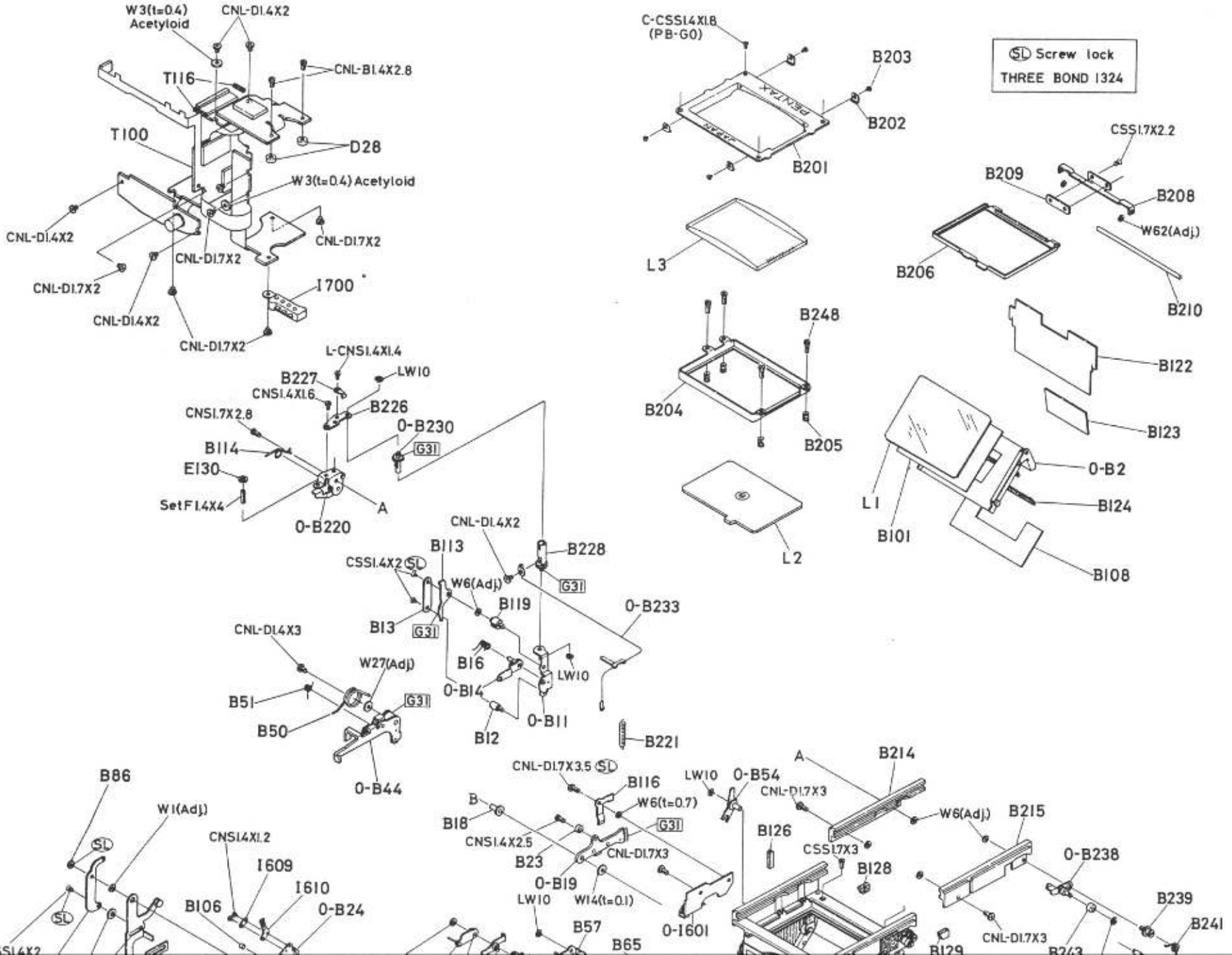
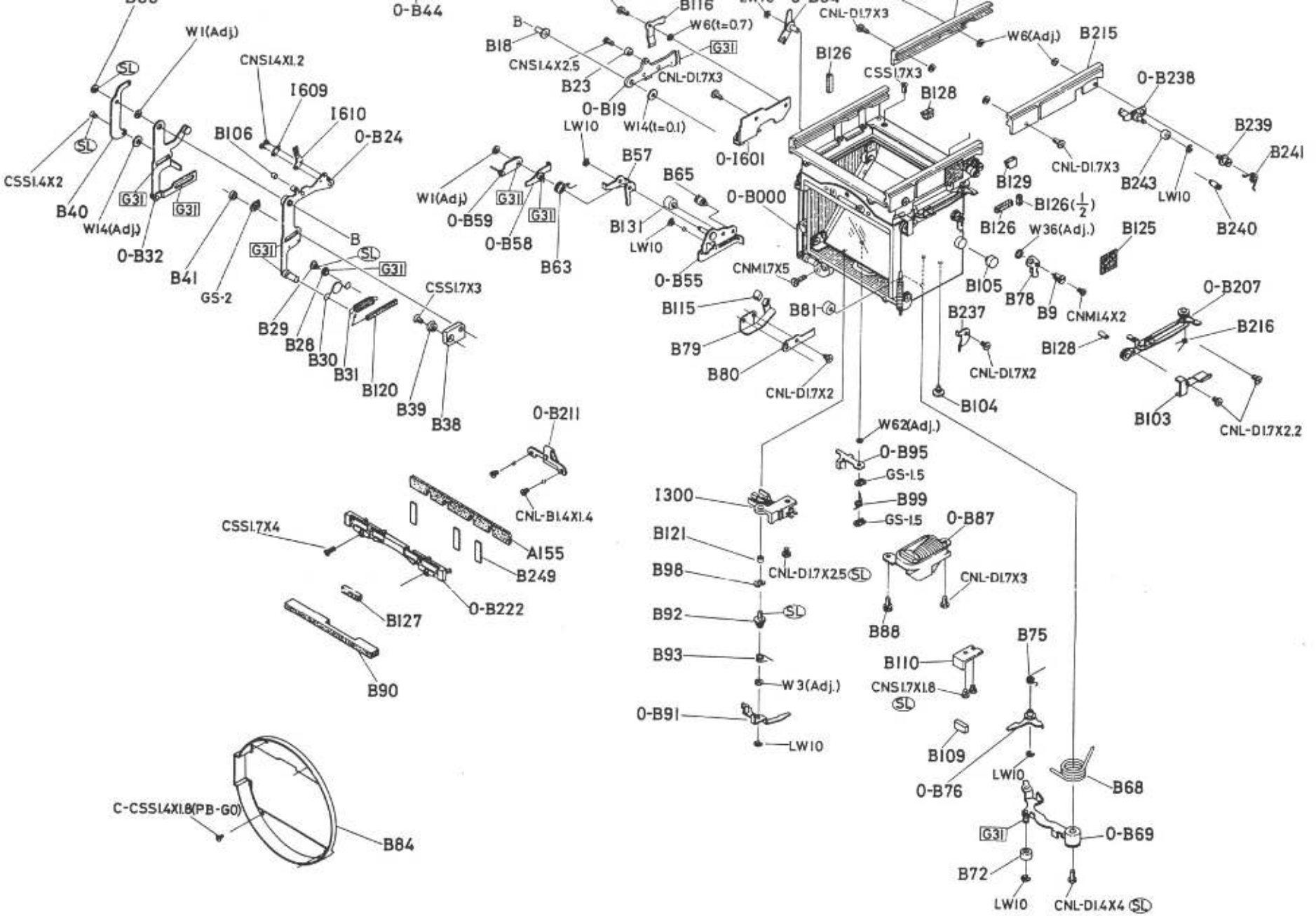
Fig. 1

EXPLODED ILLUSTRATION



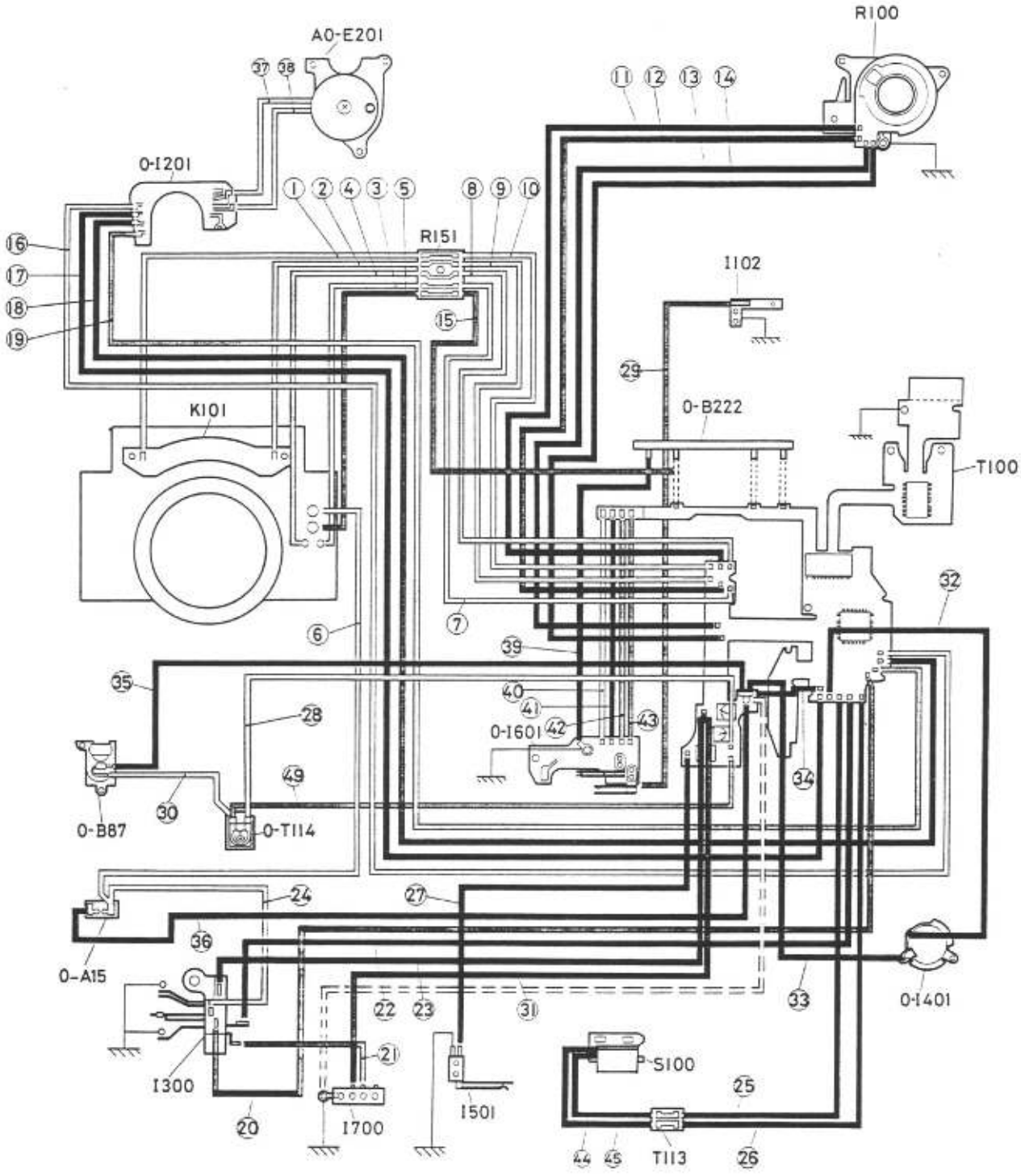


Product No. 24000

PENTAX ILX

Fig. 2

DISTRIBUTING WIRES



Product No. 24000

PENTAX ILX

Fig. 4

LIST OF SERVICE PARTS

Product No. 24000
PENTAX IL-X

Note: 1. The parts with numbers starting '0-' are assemblies.

2. Only available parts are listed below.

Parts No.	Description	Quantity	Interchangeability
A2	Back cover key retainer	1	
A3	Back cover key	1	
A4	Back cover guide screw	1	
A5	Back cover key retainer spring	1	
A6	Back cover key collar	2	
A7	Destributing wire cover	1	
A8	Shutter rod cover	1	
A9	Accessory lug A	3	
A10	Accessory lug B	1	
0-A11	Shutter curtain light seal assy. (A11, A33x2)	1	
A12	Sprocket shaft receptacle, top	1	
A13	Bottom wind cap seat	1	
A14	Tripod seat	1	
0-A15	Data contact seat assy. (A15, A16x2, A17)	1	
A20	Data light seal cover	1	23820-A53
A21	Curtain shaft rest retainer screw	1	
A22	Top cover B installing shaft	1	
A23	Waterproof rubber A	1	
A24	" B	1	

Parts No.	Description	Quantity	Interchangeability
A25	Waterproof rubber C	1	
A26	" D	1	
A27	" E	1	
A28	Cord holder	1	
A29	Self-timer installing shaft	1	
A30	Waterproof rubber F	1	
A31	Light seal curtain A	2	
A35	Light seal tape	1	
A36	Hinge cover	2	
A37	P. C. board pattern installing shaft	1	
A38	Waterproof rubber G	1	
A39	" H	1	
A100	Front board assy. (A101, A102, A103, A104, A105, A106x6, A107, A108, A109, A110, A111, A112, A115, A116, A117, A118x2, A119x2, A120x2, A121, A122x2, A123x2, A124, A125x5, A126x5, A127, A128, A129x2, A130x2, A131, A132, A133, A134, A135, A136, A137, A138, A139, A140, A141, A142, A143, A144, A146, A147, A148, A149, A152, A153, A154, A156x2, A157, C112, K101, K102, CSS1. 4x2x4, CNS1. 7x2x2, CNS1. 7x2. 5, CNL-D1. 4x2. 5, CNL-D1. 7x2. 5, CNL-D1. 7x3x2, T-CSS1. 7x2. 5, W43, W57, LW7x2)	1	
A104	Mount ring	1	
A105	Mount spring	1	23900-A105
A106	Mount retainer screw	6	23900-A106
A110	Mount lock pin collar	1	
A111	Mount lock button spring	1	23800-A111
A112	Mount lock pin support plate	1	
A113	Front board retainer screw	4	23900-A132-01

Parts No.	Description	Quantity	Interchangeability
0-A116	FP-terminal assy. (A116, A118, A119, A120, A123)	1	
0-A117	X-terminal assy. (A117, A118, A119, A120, A123)	1	
A121	Auto synch. contact pin holder	1	
A122	Auto synch. contact pin	2	
0-A124	Diaphragm coupler ring assy. (A124, A115, A125x5, A126x5, A127, A129x2, A130x2, K102)	1	
A128	Diaphragm coupler ring restitution spring	1	23800-A139
A134	Self-charge lever retainer nut	1	
A135	Self-lock button	1	
A136	Self-charge lever	1	
A137	Self-charge lever cover	1	
0-A139	Self-charge base plate assy. (A139, A132, A133)	1	
A140	Stop-down lever spring	1	
A141	Self-lock button spring	1	
0-A142	Stop-down lever assy. (A142, A144)	1	
A143	Stop-down lever shaft screw	1	
0-A146	Mirror up switching plate assy. (A146, A147)	1	
0-A148	Self-charge lever shaft assy. (A148, A131, A149)	1	
A150	Covering A	1	
A151	Covering B	1	
A152	Front board waterproof rubber A	2	
A153	Mount cover ring	1	
A154	Contact pin restitution spring	2	

Parts No.	Description	Quantity	Interchangeability
A155	Front board waterproof rubber B	1	
A156	Diaphragm coupler ring retainer	2	
A157	Front board insulation seal	1	
A200	Back cover assy. (A201, A202, A203, A208x4, A209, A210, A211, A212, A213, A214, A215, A216, A217x5, A218, A219x2)	1	
0-A205	Pressure plate assy. (A205, A206, A207x2)	1	
A219	Back cover waterproof rubber	2	
A220	Pressure plate cover	1	
0-A301	Top cover A assy. (A301~A317, CSS1.4x1.4x2, BO1.2, W2)	1	
0-A305	Shutter button receptacle assy. (A305, A306)	1	
A307	Shutter button lock lever	1	
A308	Shutter button lock lever shaft	1	
A309	Shutter button	1	
A310-00000J	Shutter button seat	1	
0-A311-00A	Click adjusting washer A assy. (A311-00A t=0.3, A312)	1	
0-A311-00B	Click adjusting washer B assy. (A311-00B t=0.4, A312)		
A313	Shutter button core	1	
A314	Shutter button lock lever spring	1	
A315	Shutter button seat click spring	1	
A316	Shutter button guide screw A	1	
A317	" B	1	
A318	Top cover retainer screw	2	
0-A351	Top cover B assy. (A351, A352, A356~A362)	1	

Parts No.	Description	Quantity	Interchangeability
A353	Seal ring	1	
A354	Seal ring washer	1	
A355	Seal rubber ring	1	
A356	Finder lock release button	1	
A357	Lock release button seat	1	
A358	Lock release button restitution spring	1	
A361	Lock release button seat restitution spring	1	
A362-00A A362-00B	Lock release button seat collar A (t-0.3) " B (t-0.2)	1	
A400	Bottom cover assy. (A401, A406, A407, A408, A409, A410, A411, A412, A414, GS1.5)	1	
0-A402	Battery cap assy. (A402, A413)	1	
A403	Bottom wind cap	2	
A404	Bottom cover retainer seat	2	
A405	Shock absorbing rubber	2	
A406	Bottom wind restriction pin	1	
A412	Waterproof washer	1	
A414	Scratch protection seal	1	
A501	Shutter rod	1	
A502	Bulb actuating plate	1	
A503	Bottom release restriction plate	1	
0-A504	Shutter rod positioning plate assy. (A504, A508)	1	
A505	Mirror release plate	1	
A506	Self-charge release plate	1	

Parts No.	Description	Quantity	Interchangeability
A507	Shutter rod spring	1	
0-B000	Mirror housing complete assy. (B1～B21, B23～B63, B65～B84, B86～B88, B90～B99, B101～B106, B108～B129, B206～B212, B214～B221, B226～B247, B249, I 601～I 611, L1, L4, L5, T106, CSS1. 4x2x3, CSS1. 7x2. 2x2, CSS1. 7x3x2, CNS1. 4x1. 2x2, CNS1. 4x1. 6x2, CNS1. 4x2. 5, CNS1. 7x1. 8x2, CNS1. 7x2. 8, CNM1. 4x2, CNM1. 7x5, CNL-B1. 4x1. 4x2, CNL-D1. 4x2, CNL-D1. 4x3, CNL-D1. 4x4, CNL-D1. 7x2x2, CNL-D1. 7x2. 2x2, CNL-D1. 7x2. 5, CNL-D1. 7x4, CNL-D1. 7x3. 5, L-CNS1. 4x1. 4, Set F1. 4x2x2, W1x2, W3, W6x6, W14x2, W27, W36, W62x3, LW10x9, GS1. 5x2, GS2)	1	
0-B2	Mirror seat assy. (B2～B8, B101, B108, L1)	1	
B9	Mirror seat shaft	1	
0-B11	Support plate assy. (B11, B10)	1	
B12	Support plate retainer screw	2	
B13	Sub-plate A	1	
0-B14	Mirror seat driving gear assy. (B14, B15)	1	
B16	Mirror seat restitution spring	1	
B18	Mirror actuating lever spacer	1	
0-B19	Mirror seat actuating gear assy. (B19, B20, B21x2)	1	
B23	Mirror flip-up adjusting collar	1	
0-B24	Mirror actuating lever assy. (B24, B25, B26, B27, B111, B112, B117, B118, B123, B124)	1	
B28	Omega spring collar	2	
B29	Omega spring retainer screw	1	
B30	Omega spring	1	

Parts No.	Description	Quantity	Interchangeability
B31	Mirror flip-up spring	1	
0-B32	Diaphragm priority actuating lever assy. (B32, B33, B34, B35, B36)	1	
B38	Diaphragm actuating lever stopper	1	
B39	Diaphragm actuating lever stopper collar	1	
B40	Sub-plate B	1	
B41	Diaphragm priority actuating lever collar	1	
0-B44	Diaphragm actuating lever assy. (B44, B43, B45, B46, B47, B48, B49)	1	
B50	Diaphragm actuating lever spring	1	
B51	Diaphragm priority actuating lever spring	1	
0-B54	Shutter actuating lever assy. (B54, B53)	1	
0-B55	Hook lever shaft base plate assy. (B55, B56, B62)	1	
B57	Hook lever driving lever	1	
0-B58	Hook lever assy. (B58, B60)	1	
0-B59	Self-timer hook plate assy. (B59, B60, B61)	1	
B63	Hook lever spring	1	
B65	Hook lever base plate retainer screw	1	
B68	Restitution lever spring	1	
0-B69	Restitution lever assy. (B69, B67, B70, B71)	1	
B72-00D -00E -00F	Mirror-charge column collar D " E " F	1	
B75	Restitution lever hook plate spring	1	

Parts No.	Description	Quantity	Interchangeability
0-B76	Restitution lever hook plate assy. (B76, B74)	1	
B78	Light metering mirror stopper	1	
B79	Mirror seat receptacle	1	
B80	Mirror seat receptacle retainer plate	1	
B81	Mirror seat sub-receptacle	1	
B84	Light seal frame	1	
0-B87	Cell frame assy. (B87, L4, L5, T106)	1	
B88	Cell frame retainer screw	1	
B90	Mirror shock absober	1	23800-B90-01
0-B91	FP switch lever assy. (B91, B94)	1	
B92	FP switch lever shaft	1	
B93	FP switch lever spring	1	
0-B95	Power switch lever assy. (B95, B96)	1	
B98	Spring washer	1	
B99	Power switch lever spring	1	
B101	Mirror adhesive tape	1	
B103	Roller cover	1	
B104	P. C. board pattern retainer A	1	
B105	" B	1	
B106	Insulation tube	1	
B108	Anti-reflection seal	1	
B109	Restitution lever stopper	1	
B110	Restitution lever stopper plate	1	

Parts No.	Description	Quantity	Interchangeability
B113	Brake lever	1	
B114	Brake lever spring	1	
B115	Mirror seat receptacle rubber	1	
B116	Mirror seat actuating gear retainer	1	
B119	Brake lever shaft	1	
B120	Mirror flip-up spring silencer	1	
B121	FP switch lever shaft collar	1	
B122	Light metering mirror light seal curtain	1	
B123	Light metering mirror light seal A	1	
B124	" B	1	
B125	Light seal curtain B	1	
B126	Light seal A	3	
B127	" B	1	
B128	" C	1	
B129	" D	1	
B131	Hook plate stopping screw	1	
B201	Ground glass mask	1	
B202	Ground glass retainer	4	
B203	Ground glass retainer screw	4	
B204	Focus adjusting plate	1	
B205	Focus adjusting plate spring	4	
B206	Focusing plate holder	1	
0-B207	LED installing plate assy. (B207, B217, B218, B219, B220, B235, B236)	1	
B208	Focusing plate holder shaft receptacle	1	
B209	Shaft receptacle retainer plate	1	23800-B104

Parts No.	Description	Quantity	Interchangeability
B210	Focusing plate holder shaft	1	
0-B211	Hook plate assy. (B211, B212)	1	
B214	Finder guide A	1	
B215	Finder guide B	1	
B216	Exposure compensation warning lever spring	1	
B218	Exposure compensation warning plate	1	
0-B220	Diaphragm-shutter synch. time adjusting plate assy. (B220, B244, B245, B247)	1	
B221	Match needle spring	1	
0-B222	Contact holder assy. (B222, B223x2, B224x2)	1	
B226	Bobbin driving gear shaft receptacle	1	
B227	Bobbin hook lever	1	
B228-00A -00B -00C	Bobbin A " B " C	1	
0-B230	Bobbin driving gear assy. (B230, B231)	1	
0-B233	Match needle assy. (B233, B229, B234, B246)	1	
B237	Match needle spring hanger	1	
0-B238	Finder lock lever assy. (B238, B242)	1	
B239	Finder lock lever shaft	1	
B240	Finder lock lever spring hanger	1	
B241	Finder lock lever spring	1	
B243-00A -00B -00C	Finder lock lever collar A " B " C	1	

Parts No.	Description	Quantity	Interchangeability
B248	Focusing screw	4	
B249	Finder contact insulation seal	3	
A0-C1	Winding seat assy. (C1~C3, C8 C12, C15~C20, C22~C26, C28~C30, C43, C45, C47~C49, C53, C301, CNL-B1.4x1.4x2, CNL-B1.4x1.6x2, CNL-D1.4x2, Set F1.4x1.6, W22, W63, W65)	1	
0-C4	Counter dial assy. (C5, C6, C46)	1	
C7	Counter dial retainer nut	1	
0-C14	Spool shaft receptacle assy. (C14, C302)	1	
C21	Counter dial indicator	1	
C27	Top cover retainer nut	1	
0-C31	1st winding gear assy. (C31, C13, C32, C50)	1	
C33	1st winding gear restitution stopper	1	
C34	Restitution stopper shaft	1	
0-C35	2nd winding gear assy. (C35, C36)	1	
C37	2nd winding gear shaft	1	
0-C38-00000J	Winding lever assy. (C38, C54, T-CNM1.7x3.5)	1	
C39-00A -00B	Winding lever retainer plate A t=0.4 " B t=0.2	1	
C40	Cover screw	1	
C41	Counter dial release pin	1	
C42	Winding seat retainer screw A	1	
C44	" B	1	
C47	Counter dial driving plate spring	1	

Parts No.	Description	Quantity	Interchangeability
C48	Counter dial restitution spring	1	
C51	1st winding gear restitution stopper spring	1	
C52	Counter dial set spring	1	
0-C101	Bottom winding seat assy. (C101, E22)	1	
0-C102	Bottom spool shaft receptacle assy. (C102, C302)	1	
0-C103	Bottom main gear assy. (C103, C104, C134x3, W75x3)	1	
C105	Bottom main gear retainer screw	1	23800-C265
C106	Malti-exposure lever	1	
0-C107	Malti-exposure ratchet assy. (C107, C109)	1	
C108	Malti-exposure lever retainer screw	1	
C110	Eccentric collar	1	
C111	Cover	1	
C113	Idle gear A	1	
C114	Idle gear A retainer screw	1	
C115	Idle gear B	1	
0-C116	Sprocket gear assy. (C116, C117, C119x2, CE-4)	1	
C118	Sprocket collar A	1	
C120	Clutch ring	1	
0-C121	R-lever assy. (C121, C122)	1	
C123	R-lever shaft	1	
0-C124	Coupler lever assy. (C124, C127, C128)	1	
C125	Coupler lever shaft	1	

Parts No.	Description	Quantity	Interchangeability
C126	Coupler lever positioning collar	1	
C129	Cord holder	1	
C131	Coupler lever spring	1	
C132	R-lever spring	1	
C133	Malti-exposure lever spring	1	
C135	Sprocket shaft	1	
C136	Sprocket	1	23800-C236
C137	Clutch ring retainer screw	1	23900-C135-02
C138	Clutch ring retainer screw collar	1	23900-C136-01
C139	Sprocket spring	1	23900-C133
C140	Sprocket collar B		
C141	Coupler lever support seat	1	
0-C201	Spool assy. (C201, C202, C203x17, C204, C205, C206, C207, C209, Set F1.4x2.2x3, W91x2)	1	
C210	Spool spacer	1	
C303	Ball-bearing C	1	
0-D2	Rewind knob assy. (D2, D1, D4, D5, D6, CNM1.4x1.6x2, L-CNM1.7x2.2)	1	
D7	Rewind shaft	1	
D8	Rewind shaft receptacle	1	
0-D9	Exposure compensation coupling cam assy. (D9, D10, D11x2)	1	
0-D12 -00000J	Exposure compensation switching ring assy. (D12, D13, D14x2, D15, D16, D17, D18, D19x2, D20, D21, D23, D24x3, D27)	1	(0-D-12-00-KKKJ
D22	Rewind shaft spring	1	
D23	Switching ring rubber	1	

Parts No.	Description	Quantity	Interchangeability
D25	Exposure compensation warning lever	1	
D26	Warning lever spring	1	
D28	P. C. board pattern support collar	2	
D29	Switching ring protector	1	
0-E1	1st curtain pinion assy. (E1, E2, E38x2)	1	
E2	1st curtain string bobbin	1	
E3	2nd curtain pinion	1	
E23	Coupler pinion	1	
E26	Worm	2	
E29	Worm wheel	2	
A0-E30	Shutter curtain block assy. (E30, E4, E5, E6, E9~E20, E21x2, E27, E28, E31, E33~E36, E39, E40, C302x4, LW15)	1	
E32	Coupler pinion retainer nut	2	
E37	Curtain shaft rest	1	
E41	Coupler pinion pin	1	
E42	1st curtain pinion brake spring	1	
A0-E101	Shutter mech. plate assy. (E101, E7, E8, E25, E102, E112, E123, E126, E130, E135~E144, E150, E157, C302, C303, CSS1. 4x1. 6x3, CNL-B1. 4x2, W6, W65, W90x2, LW17)	1	
0-E103	Top selector gear assy. (E103~ E107, E161)	1	
0-E108	Top selector gear retainer assy. (E108, E109)	1	
0-E110	Bottom selector gear assy. (E110, E111)	1	
0-E113	Bottom intermediate gear assy. (E113~E118, E119x3, E149, C303)	1	

Parts No.	Description	Quantity	Interchangeability
0-E120	Top intermediate gear assy. (E120, E121, E122x3)	1	
E124	Reverse stopper	1	
E125	Reverse stopper nut	1	
0-E127	Bulb lever assy. (E127, E146, E159)	1	
0-E128-00A	High speed lever A assy. (E128-00A, E129~E134, E152, E153, Set F1.4x2.2)	1	
-00B	High speed lever B assy. (E128-00B, E129~E134, E152, E153, Set F1.4x2.2)		
-00C	High speed lever C assy. (E128-00C, E129~E134, E152, E153, Set F1.4x2.2)		
E130	Adjusting nut	5	23800-E137
E147	Cocked indicator	1	
E148	Reverse stopper rest	1	
E149	Bottom intermediate gear spring	1	
E151	Bulb lever spring	1	
E154	Reverse stopper spring	1	
E155	Winding seat retainer nut	1	
E156	Intermediate gear retainer	1	
E158	Mech. plate positioning screw	2	23401-D147-01
0-E160-00A	Timing switch pin A assy. (E160-00A, E145, E166)	1	
-00B	Timing switch pin B assy. (E160-00B, E145, E166)		
E162	Timing switch contact lever spring	1	
E163	Timing switch contact lever	1	
E164	Timing switch contact lever washer	1	
E165	Contact lever retainer nut	1	

Parts No.	Description	Quantity	Interchangeability
A0-E201	Shutter speed selector dial seat assy. (E201∼E205, E208∼E214, E215x4, E217x2, E218x2, E219, E225, E226, F100, CNL-G2x2.2, T-CSM1.7x2.5, T-CNL-D1.7x2.5, W58)	1	
0-E206-00A	High speed cam A assy. (E206-00A, E207)		
-00B	High speed cam B assy. (E206-00B, E207)	1	
-00C	High speed cam C assy. (E206-00C, E207)		
E222	Shutter speed dial rubber ring	1	
E223	Shutter speed dial cover ring	1	
0-E224-00000J	Shutter speed dial assy. (E224-00000J, E216)	1	
0-E301	Bounce lever seat assy. (E301, E22x3, E302, E303, E307, E308, E317, E318, E319, CSS1.7x2.5, W54)	1	
E310	Magnet warning lever	1	
E311	Magnet warning lever shaft	1	
E312	Magnet warning lever adjusting nut	1	
E313	Magnet warning coupler lever	1	
E314	Bounce lever seat retainer screw A	1	
E315	" B	1	
E316	Magnet warning lever spring	1	
A0-E401	Bottom shutter mech. plate assy. (E401, E8, E22, E24, E25, E406, E411, E415, E416, E417, E418, C302, C303, CNL-B1.4x2, W2, W90x2, LW10)	1	
0-E402	Coupler gear assy. (E402, E403, E404, E405, E414, CNS1.4x1.6x2, W73, CE-5)	1	
E407	Mirror seat restitution lever	1	
E408	Mirror seat restitution lever shaft	1	

Parts No.	Description	Quantity	Interchangeability
0-E410	Armature lever guide plate assy. (E410, E409)	1	
E412	R-lever adjusting collar	1	
E413	R-lever adjusting collar retainer screw	1	
0-E416-00A	Bottom release plate A assy. (E416-00A, E417)	1	
-00C	Bottom release plate B assy. (E416-00C, E417)		
0-H000	Self-timer	1	
I 101	X contaxt piece A	1	
I 102	" B	1	
I 103	Insulation plate	2	
I 104	Insulation base	2	
I 105	Contact piece spacer	1	
0-I 201	Timing switch p. c. board assy. (I 201, I 203)	1	
0-I 202	Timing switch p. c. board base plate assy. (I 202, I 204)	1	
I 205	Timing switch p. c. board retainer screw	2	
I 206	Insulation tape	1	
0-I 251	Auto-manual switching lever assy. (I 251, I 253x2, I 254)	1	
I 252	Switching lever shaft	1	
I 255	Switching lever spring	1	
I 300	Power switch block	1	
0-I 401	Battery case assy. (I 401, I 402, I 403, I 404, I 405)	1	
I 501	2nd curtain switch contact piece A	1	
I 502	" B	1	

Parts No.	Description	Quantity	Interchangeability
0-I 601	Magnet switch p. c. board assy. (I 601, I 602x2, I 603x2, I 604x4, I 605, I 606, I 607, I 608, I 611, I 612)	1	
I 609	Magnet switch contact piece reinforcement plate	1	
I 610	Magnet switch contact piece	1	
I 700	MD connector	1	
K101	f-volume	1	
L1	Mirror	1	
L2	Fresnel lens	1	
L3	Ground glass	1	
R100	ASA volume	1	
R151	Relay p. c. board	1	
0-S4	Armature lever assy. (S4, S1, S2, S5, S6, S7, S8, S11, S12, S13, S16, S17, S18, S19)	1	
S6-00A -00B -00C	Armature lever adjusting screw A " B " C	1	
S7	Safety lever adjusting collar	1	
S16	Magnet lever spring	1	
S17	Safety lever spring	1	
S19	Magnet lever shaft collar	1	
S21	Magnet lever spring silencer	1	
S100	Magnet	1	
S201	Armature	1	
T100	P. C. board pattern	1	
T113	Relay board	1	
0-T114	Flash synch. LED adjusting VR assy. (T114, T115)	1	

Parts No.	Description	Quantity	Interchangeability
T116	Dust prevention seal	2	

LIST OF STANDARD PARTS

Product No. 24000

PENTAX IL X

Small screws:

Description	Surface treatment	Position of use	Quantity
CSS1.4x1.4	Black nickel	0-A301, 0-A305	2
CSS1.4x1.6	"	A0-E201, 0-E224	3
CSS1.4x2.0	"	A139, A100	4
		B13, B12, B119	2
		B40, 0-B000	1
CSS1.7x1.8	"	A404, A400, A1	1
CSS1.7x2.0	"	0-C102, A1	1
		A0-E401, A1	1
CSS1.7x2.2	"	B208, B209, B1	2
		0-C14, A1	3
		0-C116, A1	1
		D8, A1	3
CSS1.7x2.5	"	A0-E201, C42	1
		0-E401, A1	1
CSS1.7x2.5	Black nickel (PB-G50)	0-A351, A22	1
		0-A301, E315	1
CSS1.7x3.0	" (")	A400, A14	1
CSS1.7x3 0	Black nickel	A2, A1	2
		A13, A1	2
		A404, A400, A1	1
		0-B000, A1	2
		B38, 0-B000	1
CSS1.7x4.0	"	0-B222, 0-B000	2
CSM1.2x3.0	"	0-E108, 0-E103	1
CSM1.4 x 2.0	"	A502, A501	1
CSM1.4x4.0	"	E3	1
CSM1.7x3.0	"	A400, A1	1

Description	Surface treatment	Position of use	Quantity
CSM1.7x3.5	Black nickel	A14, A1	1
CNS1.4x1.2	"	I610, 0-B24	2
		E147, 0-E160	2
CNS1.4x1.6	"	B226, 0-B220	2
		C110, C106	1
		0-I202, A0-C1	3
CNS1.4x2.0	"	0-H000, I104	2
CNS1.4x2.2	"	S7, 0-S4	1
CNS1.4x2.5	"	0-H000, A29	1
		0-B19, B23	1
CNS1.4x5.5	"	D29, 0-D12, 0-D9	3
CNS1.7x1.6	"	0-A11, A1	2
CNS1.7x1.8	"	B110, 0-B000	2
CNS1.7x2.0	"	A112, A100	2
CNS1.7x2.5	"	0-A504, A1	2
		E37, A1	1
		0-E410, A1	1
		K101, A100	1
CNS1.7x2.8	"	0-B220, 0-B000	1
CNS1.7x3.0	"	A0-C1, A1	1
		0-C101, A1	2
CNM1.4x2.0	"	A505, A501	2
		A506, A501	2
		B78, 0-B000	1
CNM1.7x2.0	"	0-C102, A1	1
CNM1.7x2.5	"	A5, A1	2
		A0-E101, A1	1
		0-H000, A1	1
CNM1.7x5.0	"	0-B000, A1	1
CNL-B1.4x1.4	"	0-B211, 0-B000	2
		C21, A0-C1	1
CNL-B1.4x2.0	"	I501, 0-C101	2

Description	Surface treatment	Position of use	Quantity
CNL-B1.4x2.5	Black nickel	A0-C1, C38	4
		0-E120, A0-E101	1
CNL-B1.4x2.8	"	T100, D8	2
CNL-B1.4x3.5	"	E2, E1	2
CNL-D1.4x1.2	"	E2	2
		R151, R100	1
CNL-D1.4x2.0	"	0-B233, B228	1
		D25, R100	1
		T100, A37	1
		T100, 0-B000	1
		T100, 0-B207	2
CNL-D1.4x2.2	"	E313, 0-S4	1
CNL-D1.4x2.5	"	0-A146, A135	1
CNL-D1.4x3.0	"	0-B44, 0-B000	1
CNL D1.4x4.0	"	0-B69, 0-B000	1
		A0-E201, A0-E101	1
CNL-D1.7x2.0	"	B79, 0-B000	2
		B237, 0-B000	1
		T100, A1	3
		T100, A21	1
		T100, 0-B000	2
CNL-D1.7x2.2	"	0-B207, 0-B000	2
		A0-E30, A1	2
		A0-E201, E314	1
CNL-D1.7x2.5	"	I300, 0-B000	1
		0-I401, A1	2
		K101, A100	1
CNL-D1.7x3.0	"	A156, A100	2
		0-B87, 0-B000	2
		B214, 0-B000	1
		B215, 0-B000	1
		0-I601, 0-B000	2
		R100, A1	3
CNL-D1.7x3.5	"	B116, 0-B000	1
		S100, A1	2

Description	Surface treatment	Position of use	Quantity
C-CSS1. 4x1. 8	Black nickel (PB-G0)	B84, 0-B000	4
		B201, 0-B000	4
L-CNS1. 4x1. 4	Black nickel	B226, 0-B220	1
T-CSS1. 7x2. 5	"	A136, A137	1
Set-F1. 4x2. 2	"	E310, E312	1
Set-F1. 4x4	"	E130, 0-B220	1
Set-T1. 7x1. 8	"	E37	2

Washers:

Description	Material	Thickness	Position of use	Quantity
W1	Steel	0. 3	E310, E315	1
W1	Brass	0. 03, 0. 05, 0. 07	0-B32, B40	1
		0. 1, 0. 15, 0. 2	B57, 0-B59	1
W2	"	(0. 05, 0. 1, 0. 15	0-C121, C132	1
			S201	1
		0. 2	E37	1
W3	Acetyloid	0. 4	T100	2
W3	Steel	0. 1, 0. 2	0-B91, B93	1
		0. 3	0-C35, A1	1
			C113, A1	1
W4	Brass	0. 3	S6	1
W6	"	0. 03, 0. 05, 0. 07	B113, B119	1
		0. 1, 0. 15, 0. 2,	B214, 0-B000	2
		0. 25	B215, 0-B000	2
			E310, E311	1
		0. 2	C115, C303	1
			0-C121, C123	1
		0. 4	A501, A503	1
		0. 7	B116, 0-I601	1
W8	"	0. 05, 0. 1, 0. 2, 0. 4	C136, A1	1
W14	"	0. 03, 0. 05, 0. 07	A100, 0-B000	4
		0. 1, 0. 15, 0. 2	0-B32, B40	1
		0. 1	0-B000, 0-B19	1

Description	Material	Thickness	Position of use	Quantity
W17	Brass	0.3	0-A351, A361	1
W27	"	0.07, 0.1, 0.2	0-B44	1
W32	"	0.01, 0.03, 0.05, 0.07	0-C101, C115	1
		0.1, 0.2, 0.3	0-E1, 0-E301	1
			E3, 0-E301	1
W36	"	0.05, 0.07, 0.1 0.15	B78, 0-B000	1
W40	"	0.3	C135, C139	1
W57	"	0.2	A136, 0-A139	1
W62	"	0.05, 0.1, 0.2	0-B000, 0-B95	1
			B206, B208	2
W62	"	0.03, 0.05, 0.1, 0.15, 0.4	0-C124, C125	1
W70	"	0.05, 0.07, 0.1	E407, E408	1
W88	"	0.05, 0.1, 0.2	0-C14, 0-C201	1
W90	"	0.3	0-C102, 0-C103	1
W1.8x2.5	"	0.03, 0.05, 0.1, 0.2	A0-E201, 0-E206	1

Lock washers:

Description	Position of use	Quantity
LW7	A122	2
LW10	0-B54	1
	0-B55	1
	B57	1
	0-B69	1
	0-B76	1
	B92	1
	B228	1
	0-B230	1
	0-B238	1
	S201	1
LW13	A356	1
LW15	0-S4	1

Description	Surface treatment	Position of use	Quantity
C-CSS1. 4x1. 8	Black nickel (PB-G0)	B84, 0-B000	4
		B201, 0-B000	4
L-CNS1. 4x1. 4	Black nickel	B226, 0-B220	1
T-CSS1. 7x2. 5	"	A136, A137	1
Set-F1. 4x2. 2	"	E310, E312	1
Set-F1. 4x4	"	E130, 0-B220	1
Set-T1. 7x1. 8	"	E37	2

Washers:

Description	Material	Thickness	Position of use	Quantity
W1	Steel	0. 3	E310, E315	1
W1	Brass	0. 03, 0. 05, 0. 07	0-B32, B40	1
		0. 1, 0. 15, 0. 2	B57, 0-B59	1
W2	"	(0. 05, 0. 1, 0. 15	0-C121, C132	1
			S201	1
		0. 2	E37	1
W3	Acetyloid	0. 4	T100	2
W3	Steel	0. 1, 0. 2	0-B91, B93	1
		0. 3	0-C35, A1	1
			C113, A1	1
W4	Brass	0. 3	S6	1
W6	"	0. 03, 0. 05, 0. 07	B113, B119	1
		0. 1, 0. 15, 0. 2,	B214, 0-B000	2
		0. 25	B215, 0-B000	2
			E310, E311	1
		0. 2	C115, C303	1
			0-C121, C123	1
		0. 4	A501, A503	1
		0. 7	B116, 0-I601	1
W8	"	0. 05, 0. 1, 0. 2, 0. 4	C136, A1	1
W14	"	0. 03, 0. 05, 0. 07	A100, 0-B000	4
		0. 1, 0. 15, 0. 2	0-B32, B40	1
		0. 1	0-B000, 0-B19	1

Description	Material	Thickness	Position of use	Quantity
W17	Brass	0.3	0-A351, A361	1
W27	"	0.07, 0.1, 0.2	0-B44	1
W32	"	0.01, 0.03, 0.05, 0.07	0-C101, C115	1
		0.1, 0.2, 0.3	0-E1, 0-E301	1
			E3, 0-E301	1
W36	"	0.05, 0.07, 0.1 0.15	B78, 0-B000	1
W40	"	0.3	C135, C139	1
W57	"	0.2	A136, 0-A139	1
W62	"	0.05, 0.1, 0.2	0-B000, 0-B95	1
			B206, B208	2
W62	"	0.03, 0.05, 0.1, 0.15, 0.4	0-C124, C125	1
W70	"	0.05, 0.07, 0.1	E407, E408	1
W88	"	0.05, 0.1, 0.2	0-C14, 0-C201	1
W90	"	0.3	0-C102, 0-C103	1
W1.8x2.5	"	0.03, 0.05, 0.1, 0.2	A0-E201, 0-E206	1

Lock washers:

Description	Position of use	Quantity
LW7	A122	2
LW10	0-B54	1
	0-B55	1
	B57	1
	0-B69	1
	0-B76	1
	B92	1
	B228	1
	0-B230	1
	0-B238	1
	S201	1
LW13	A356	1
LW15	0-S4	1

Description	Position of use	Quantity
LW17	C135	1
GS-1.5	A406	1
	0-B95	1
	B99	1
	C34	2
GS-2.0	0-B24	1
GS-2.5	C37	1
G-6	A357	1

Balls:

Description	Material	Diameter	Position of use	Quantity
BO1.2	Steel	1.2mm	A310, 0-A311	1
BO1.5	"	1.5mm	0-D9, R100	2

Lead wires:

Lead wire No.	Length	Color	Position of use	Quantity
1	110mm	Yellow	K101, R151	1
2	50	Yellow	K101, R151	1
3	50	Sky blue	K101, R151	1
4	50	Pink	K101, R151	1
5	45	Gray	K101, R151	1
6	80	White	0-A15, K101	1
7	40	Sky blue	R151, T100	1
8	30	Pink	R151, T100	1
9	40	Yellow	R151, T100	1
10	40	Yellow	R151, T100	1
11	35	Purple	R100, T100	1
12	35	Green	R100, T100	1

Lead wire No.	Length	Color	Position of use	Quantity
13	50	Brown	R100, T100	1
14	55	Brown	R100, T100	1
15	65	Gray	0-B222, R151	1
16	195	Sky blue	0-I 201, T100	1
17	190	Brown	0-I 201, T100	1
18	190	Green	0-I 201, T100	1
19	185	Pink	0-I 201, T100	1
20	25	Blue	I 300, T100	1
21	65	Orange	I 300, I 700	1
22	15	Red	I 300, T100	1
23	45	Green	I 300, T100	1
24	50	White	0-A15, I 300	1
25	30	Black	T100, T113	1
26	30	Black	T100, T113	1
27	100	Purple	I 501, T100	1
28	45	Yellow	T100, 0-T114	1
29	45	Gray	I 102, 0-I 601	1
30	20	Yellow	0-B87, 0-T114	1
31	30	Green	I 700, T100	1
32	30	Red	0-I 401, T100	1
33	45	Black	0-I 401, T100	1
34	45	Black	T100	1
35	45	Black	0-B87, T100	1
36	45	Black	0-A15, T100	1
39	25	Black	0-B222, 0-I 601	1
40	13	Yellow	0-I 601, T100	1

Lead wire No.	Length	Color	Position of use	Quantity
41	13	Brown	0-I 601, T100	1
42	13	Blue	0-I 601, T100	1
43	13	Gray	0-I 601, T100	1
49	75	Orange	T100, 0-T114	1

PRODUCT No.24000

PENTAX ILX

SERVICE MANUAL ENGLISH

Disassembly.

1. A150 Covering A
   A151 Covering B
   Rear face is treated with both stick tape, so that do not touch on its face with your finger as possible.

2. A7 Distributing wire cover
   A8. Shutter rod cover

3. A400 Bottom cover assy.
   - A405 Shock absorbing rubber
   - CSSl. 7X3 ——— Cassette side
   - CSSl. 7X1. 8 ——— Spool side
   - CSSl. 7X3 (PB-G30) *
   - A404 Bottom cover retainer seat
   - A400 Bottom cover assy.
   - A36 Hinge cover

   * PB-G30 —— Symbols of standard of gloss
   PB-G0 frosting
   PB-G10
   PB-G60 most glossy

   Caution
   a. Be sure to install Temporary bottom cover 24000K-A401-A after taken out A400 —— to protect adjusted parts, especially S100 magnet, from becoming defects.
   b. Between cover plates and body casting were sealed with SEAL. So that its seals are put away from cover plates and/or body casting when cover plates taken out.

4. Rewind parts
   - 0-D2 Rewind knob assy.
   - CNSl. 4X5. 5 3pcs.
   - D29 Switching ring protector
   - 0-D12 Exposure compensation switching ring assy.
   - A355 Seal rubber ring
   - A353 Seal ring
   - A354 Seal ring washer

5. 0-A351 Top cover B assy.
   - CSSl. 7X2. 5 (PB-G30)
   - A318 Top cover retainer screw
   - 0-A351 Top cover B assy.

6. 0-C38 Winding lever assy.
   - C40 Cover screw Left handed ——— Tools 23800K-C305-A
   - CNL-Bl. 4X2. 5 4pcs.
   - C39 Winding lever retainer plate
   - 0-C38 Winding lever assy.
   - C27 Top cover retainer nut ——— 24000K-C27-A

7. 0-E224 Shutter speed dial assy.
Set shutter speed dial at 1/2000 sec.
° E222 Shutter speed dial rubber ring
° CSS1.4X1.6 3pcs.
° 0-E224 Shutter speed dial assy.
° E223 Shutter speed dial cover ring
After took out 0-E224, re-set the shutter at AUTO. (Locked position)

8. 0-A301 Top cover A assy.
° CSS1.7X2.5 (PB-G30)
° A318 Top cover retainer screw
° 0-A301 Top cover A assy.
° A36 Hinge cover

9. Unsoldering

Fig. 1

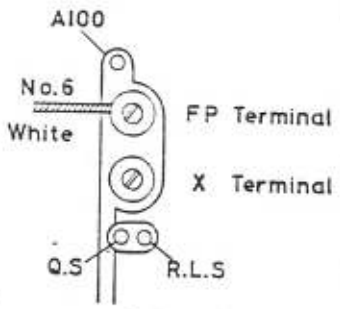


Fig. 2

10. A100 Front board assy.
° A113 Front board retainer screw
° A100 Front board assy.
° W14 (Adj.) 4 places
Unsolder No.6 white lead wire which soldered on FP-terminal, after took out A100 from the body proper.

11. B84 Light seal frame
° C-CSS1.4X1.8 (PB-G0) 4pcs.
° B84 Light seal frame

12. Unsoldering

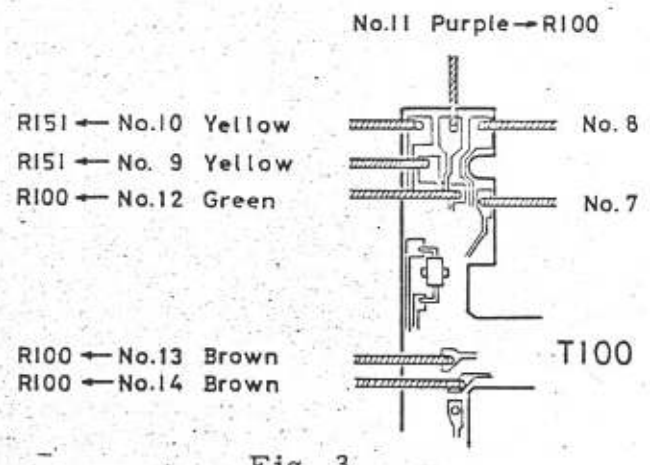

No.11 Purple → R100
R151 ← No.10 Yellow
R151 ← No. 9 Yellow
R100 ← No.12 Green
No. 8 Pink → R151
No. 7 Sky blue → R151
R100 ← No.13 Brown
R100 ← No.14 Brown
T100

Fig. 3

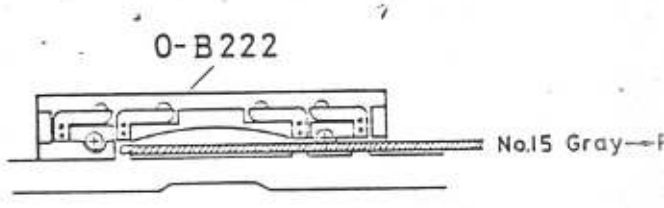


Fig. 4

13: R100 ASA volume

- CNL-D1.7X3 3pcs.
- R100 ASA volume
- BO1.5 2pcs. ..... do not loose
- 0-D9 Exposure compensation coupling cam assy.

14. Unsoldering

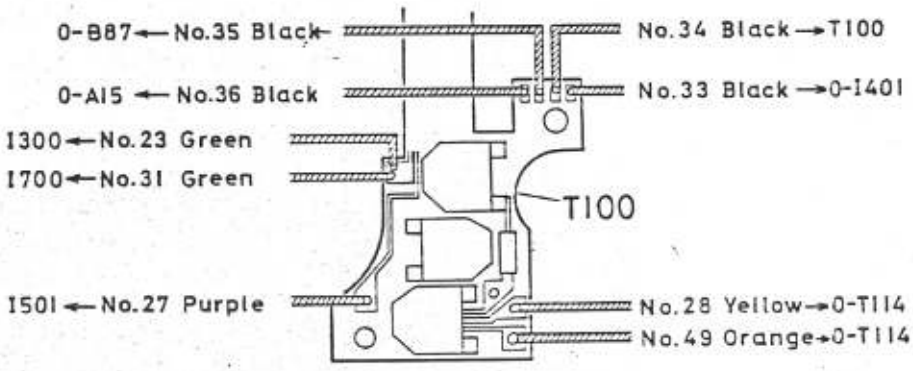


Fig. 5

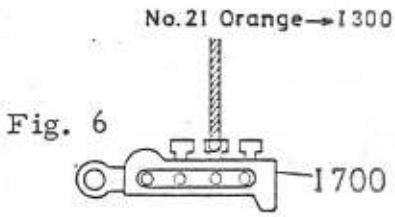


Fig. 6

15. 0-I401 Battery case assy.

- CNL-D1.7X2.5 2pcs.

16. Unsoldering

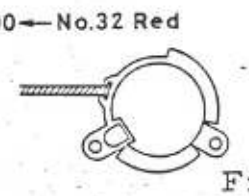


Fig. 7

- 0-I401 Battery case assy.

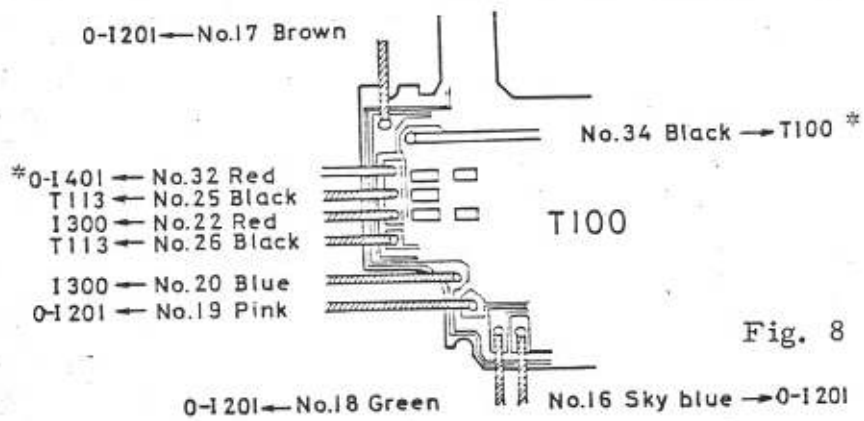


Fig. 8

* Not necessary to unsolder No. 32 red and No. 34 black lead wire at this side because the other end was already unsoldered.

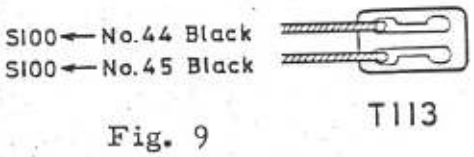


Fig. 9

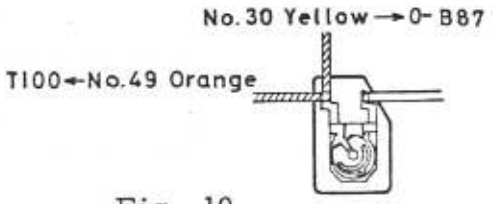


Fig. 10

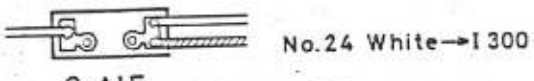


Fig. 11

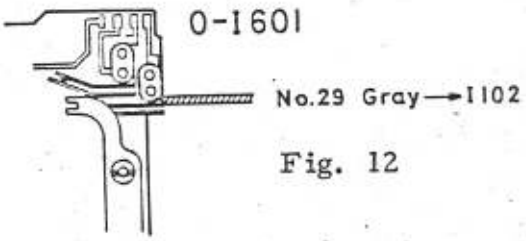


Fig. 12

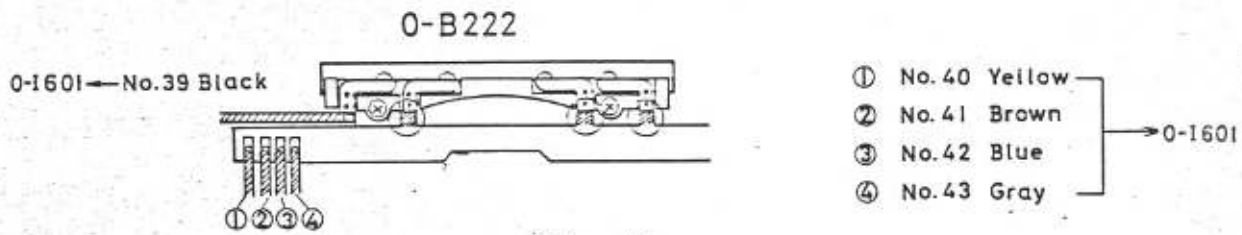


Fig. 13

* Not necessary to unsolder No. 32 red and No. 34 black lead wire at this side because the other end was already unsoldered.

17. 0-B222 Contact holder assy.
    - CSS1.7X4 2pcs.
    - 0-B222 Contact holder assy. ——— include A155 Front board waterproof rubber B

18. B201 Ground glass mask, L3 Ground glass
    - C-CSS1.4X1.8 (PB-G0) 4pcs.
    - B201 Ground glass mask ——— assembled with L3 Ground glass.

19. T100 P.C. board pattern
    - CNL-B1.4X2.8 2pcs.
    - D28 P.C. board pattern support collar 2pcs. LED part
    - CNL-D1.4X2 2pcs.
    - W3 t=0.4mm Material: Acetyloid

    - CNL-D1.7X3 4pcs.
    - W3 t=0.4mm Material: Acetyloid
    - CNL-D1.4X2 ——— Photo-sensor part

    - CNL-D1.7X2
    - I700 MD connector
    - T100 P.C. board pattern *

* Take care about matters as follows, when taking out T100.
  a. Do not pull strong, do securely and in good order.
  b. Do not hook T100 to TV wire located on the side of mirror housing.
  c. Do not touch photo-sensor with your bare finger.

20. S100 Magnet
  ° CNL-D1.7X3.5 2pcs. ——— (SL) *
  ° S100 Magnet

  * Use a solvent or soldering iron to heat when taking out.

21. 0-I251 Auto-manual switching lever assy.
  Unhook I255 Switching lever spring.
  ° I255 Switching lever spring
  ° I252 Switching lever shaft
  ° 0-I251 Auto-manual switching lever assy.

22. 0-E160 Timing switch pin A assy.
  Unhook E162 Timing switch contact lever spring.
  ° E165 Timing switch lever nut * ——— 231K-E111-A
  * Timing switch lever should be held when remove E165 to prevent bending.
  ° E162 Timing switch contact lever spring
  ° E163 Timing switch contact lever
  ° E164 Timing switch contact lever washer
  ° 0-E160 Timing switch pin A assy. ——— assembled with E147 Cocked indicator.

23. Open back cover

24. 0-C4 Counter dial assy.
  ° C7 Counter dial retainer nut ——— 24000K-C7-A
  ° 0-C4 Counter dial assy.
  ° CNL-B1.4X1.4
  ° C21 Counter dial indicator

25. Unsoldering

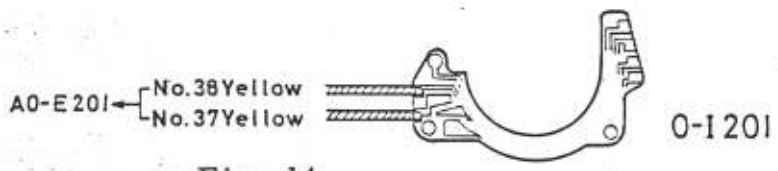


Fig. 14

26. 0-I202 Timing switch p.c. board base plate assy.
  ° 0-I201 Timing switch p.c. board assy.
  ° CNS1.4X1.6 3pcs.
  ° 0-I202 Timing switch p.c. board base plate assy.

27. A0-E201 Shutter speed selector dial seat assy.
Shutter dial AUTO position
* Hook Match-needle gear by B227 Hook lever at AUTO position whenever remove A0-E201.
Hook lever retainer screw (L-CNSl. 4Xl. 4) is left-handed screw.

- CNL-Dl. 4X4
- CNL-Dl. 7X2. 2
- CSSl. 7X2. 5
- A0-E201 Shutter speed selector dial seat assy.
- Wl. 8X2. 5
- 0-E206 High speed cam assy.
- 0-E127 Bulb lever assy.
- E151 Bulb lever spring
- 0-E128 High speed lever assy.

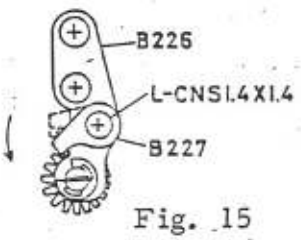


Fig. 15

28. 0-B000 Mirror housing complete assy.
- CSSl. 7X3 2pcs.
- CNMl. 7X5
- 0-B000 Mirror housing complete assy.

29. E310 Magnet warning lever
Unhook E316 Magnet warning lever spring.
- E316 Magnet warning lever spring
- E311 Magnet warning lever shaft
- W6 (Adj.)
- E310 Magnet warning lever
- Wl t=0. 3
- CNL-Dl. 4X2. 2 ——— (SL)
- E313 Magnet warning coupler lever

30. 0-All Shutter curtain light seal assy.
- CNSl. 7Xl. 6 2pcs. ——— (SL)
- 0-All Shutter curtain light seal assy.

31. A501 Shutter rod
- CSMl. 4X2
- A502 Bulb actuating plate
- CNMl. 4X2 2pcs.
- A506 Self-charge release plate
- CNMl. 4X2 2pcs.
- A505 Mirror release plate
- A501 Shutter rod
- A507 Shutter rod spring

32. 0-H000 Self-timer
- CNSl. 4X2. 5 ——— (SL)
- A28 Cord holder
- CNMl. 7X2. 5 ——— (SL)
- 0-H000 Self-timer

33. A0-C1 Winding seat assy.
Install 0-C38 Winding lever assy. temporary to the shaft of A0-C1 Winding seat assy.

° C47	Counter dial driving plate spring	
° C52	Counter dial set spring	
° C42	Winding seat retainer screw A	—— (SL)
° E155	Winding seat retainer nut	—— (SL)
° C44	Winding seat retainer screw B	—— (SL)
° CNSl. 7X3		
° A0-C1	Winding seat assy.	
° C41	Counter dial release pin	Do not loose

34. 0-C101

° CNSl. 7X3 2pcs.	——	(SL)
° C129	Cord holder —	(SL)
° E130	Adjusting nut —	(SL) —— 231K-E111-A
° 0-C101	Bottom winding seat assy.	
° W32		
° C115	Idle gear B	
° W6		
° C303	Ball-bearing C	

After removed 0-C101, fix 0-C121 R-lever assy. with W2 t=0.4 and E130 temporary.

35. Sl6 Magnet lever spring, S21 Magnet lever spring silencer
Unhook Sl6 Magnet lever spring at only E407 Mirror seat restitution lever side.
Take care that the ends of Sl6 were sticked by adhesive.

36. 0-S4 Armature lever assy.

° CSSl. 7X2. 5	
° CNSl. 7X2. 5	
° 0-E410	Armature lever guide plate assy. *

* Let off Safety lever to upper position when remove 0-E410, as shown in Fig. 16.

° E408	Mirror seat restitution lever shaft
° W70 (Adj.)	
° E407	Mirror seat restitution lever
° LW15	
° W6 (Adj.)	
° Sl9	Magnet lever shaft collar
° 0-S4	Arma ture lever assy.
° 0-E402	Coupler gear assy.

Fig. 16

Loose C105 Bottom main gear retainer screw - left handed -, not remove completely. —— because it is very hard to loose C105 at the next process.

37. 0-C35 2nd winding gear assy.
- ° C37
- ° 0-C35
- ° W3 t=0.3 (Steel)

38. 0-E120 Top intermediate gear assy., 0-E113 Bottom intermediate gear assy.
- ° CNL-B1.4X2.5
- ° E156 Intermediate gear retainer
- ° 0-E120 Top intermediate gear assy.
- ° 0-E113 Bottom intermediate gear assy.

39. Loose the tension of both curtains slowly, and take out E26 Worm.
- ° E26 Worm 2pcs.

After took out E26, screw in Set T1.7X1.8 to prevent loosing off.

40. E23 Coupler pinion
Fix 2nd curtain pinion shaft by using Tools 24000J-E120-A when taking out E32 Coupler pinion retainer nut as shown below.

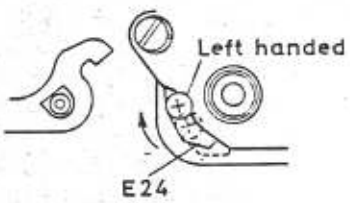


Fig. 17

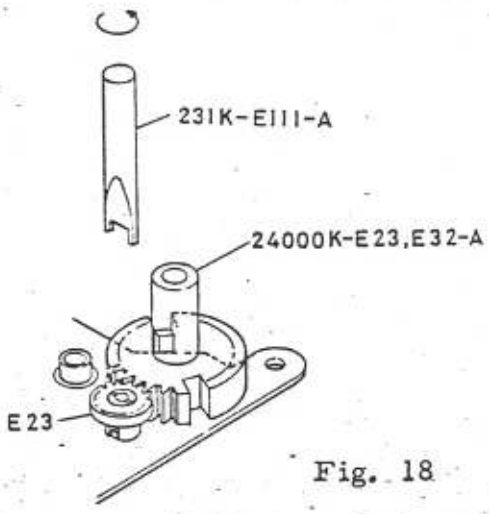


Fig. 18

- ° E32 Coupler pinion retainer nut
- ° E23 Coupler pinion
- ° E41 Coupler pinion pin *

* E41 Coupler pinion pin ought to take out as heating by soldering iron because it was fixed strongly with the instant adhesive (Aron Alpha).

Shift E24 Bottom roller shaft to the arrow direction. Retainer screw of E24 is the left handed, as shown in Fig. 17.

41. 0-E301 Bounce lever seat assy.
- ° E314 Bounce lever seat retainer screw A —— (SL)
- ° E315 Bounce lever seat retainer screw B —— (SL)
- ° 0-E301 Bounce lever seat assy. *

* Hold engagement of 1st curtain pinion shaft and Top selector gear when remove 0-E301.

42. 0-E103 Top selector gear assy., 0-E110 Bottom selector gear assy.
Set 0-E103 Top selector gear assy. at the wound condition to easier disassemble.
- CSM1.2X3 ——— (SL)
- 0-E108 Top selector gear retainer assy.
- 0-E103 Top selector gear assy.
- 0-E110 Bottom selector gear assy.

24000K-E125-A

Fig. 19

43. E124 Reverse stopper
- E154 Reverse stopper spring
- E125 Reverse stopper nut ——— Tools 24000K-E125-A
- E124 Reverse stopper

44. E37 Curtain shaft rest
- E29 Worm wheel 2pcs. ——— Left handed screw
- A21 Curtain shaft rest retainer screw ——— (SL)
- CNSl.7X2.5 ——— (SL)
- W2 t=0.2
- E37 Curtain shaft rest

45. E3 2nd curtain pinion
- CSM1.4X4 ——— (SL)
- W32
- E3 2nd curtain pinion

Shift E7 Top roller shaft to the arrow direction.

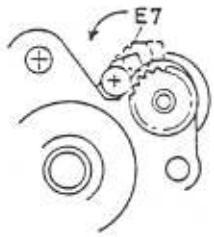


Fig. 20

46. A0-E101 Shutter mech. plate assy.
- E148 Reverse stopper rest
- E158 Mech. plate positioning screw
- CNM1.7X2.5
- A0-E101 Shutter mech. plate assy.

47. A0-E30 Shutter curtain block assy.
- CNL-D1.7X2.2 2pcs. ——— (SL)
- A0-E30 Shutter curtain block assy. *

* The greatest care must be taken in dealing with handling of A0-E30, not put scratches and/or stains.
Do not touch with your bare finger on the curtain surface at all.

48. 0-C124 Coupler lever assy.
- C131 Coupler lever spring
- C125 Coupler lever shaft
- W63
- 0-C124 Coupler lever assy.
- C126 Coupler lever positioning collar

49. A0-E401 Bottom shutter mech. plate assy.
- ° E413 R-lever adjusting collar retainer screw
- ° E412 R-lever adjusting collar
- ° CSS1.7X2
- ° A0-E401 Bottom shutter mech. plate assy.

50. 0-C103 Bottom main gear assy.
- ° C105 Bottom main gear retainer screw* —— Left handed (SL)

* Screw out at the condition 0-C103 was fixed.
- ° 0-C103 Bottom main gear assy.
- ° W90
- ° 0-C31 1st winding gear assy.

51. 0-C121 R-lever assy.
- ° E130 Adjusting nut
- ° W2 t=0.4
- ° C132 R-lever spring
- ° W2 (Adj.)
- ° 0-C121 R-lever assy.
- ° W6 t=0.2

52. C136 Sprocket
- ° C123 R-lever shaft —— (SL) Tools 24000K-C123-A
- ° CSS1.7X2 —— (SL)
- ° 0-C116 Sprocket gear assy.
- ° C118 Sprocket collar A
- ° C135 Sprocket shaft
- ° W40 t=0.3
- ° C139 Sprocket spring
- ° C136 Sprocket
- ° C140 Sprocket collar B
- ° W8 (Adj.)

53. 0-C201 Spool assy.
- ° CSS1.7X2.2
- ° 0-C14 Spool shaft receptacle assy.
- ° W88 (Adj.)
- ° C210 Spool spacer
- ° 0-C201 Spool assy.

54. 0-C102 Bottom spool shaft receptacle assy.

°	C133	Malti-exposure lever spring
°	C108	Malti-exposure lever retainer screw
°	C106	Malti-exposure lever
°	C141	Coupler lever support seat
°	0-C107	Malti-exposure ratchet assy.
°	CSS1.7X2	——— (SL)
°	CNM1.7X2	——— (SL)
°	C141	Coupler lever support seat
°	0-C102	Bottom spool shaft receptacle assy.
°	C114	Idle gear A retainer screw
°	C113	Idle gear A
°	W3	
°	C111	Cover

Assembly

1. 0-C102 Bottom spool shaft receptacle assy.
   - W3
   - C113 Idle gear A
   - C114 Idle gear A retainer screw

   Rotation of C113 Idle gear A must be smooth after fasten C114

   - 0-C102 Bottom spool shaft receptacle assy.
   - C141 Coupler lever support seat
   - CNM1.7X2 ——— (SL)
   - CSS1.7X2 ——— (SL)

   - 0-C107 Malti-exposure ratchet assy. *1 —— G31 to the shaft
   - C107 Malti-exposure lever
   - C108 Malti-exposure lever retainer screw *2
   - C133 Malti-exposure lever spring

   *1 Take notice of direction, refer to Fig. 22.
   *2 Fasten C108 Malti-exposure lever retainer screw pulling C107 to the side of film guide rail.

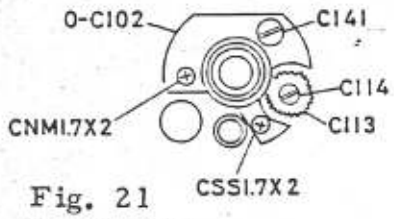


Fig. 21

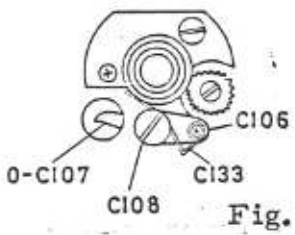


Fig. 22

2. 0-C201 Spool assy.
   - 0-C201 Spool assy.
   - C210 Spool spacer *1
   - W88 (Adj.) *2
   - 0-C14 Spool shaft receptacle assy.
   - CSS1.7X2.2 3pcs.

   *1 Take notice of direction, top and bottom.
   *2 Vertical plays of Spool
   0.1 - 0.2mm Adjust by W88

   If the spool rotation torque was out of tolerance, replace to new one, not adjust.
   Tolerance of spool rotation torque
   130 - 150 g/cm

   a. If the torque too light —— to idle winding
   b. If the torque too heavy —— to get bad function of Sprocket, not come out the film smoothly.

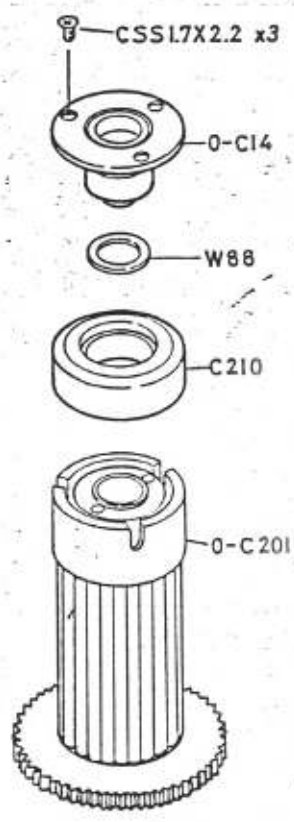


Fig. 23

3. C136 Sprocket
   - W8 (Adj.) *1
   - C140 Sprocket collar B
   - C136 Sprocket
   - C139 Sprocket spring
   - W40 t=0.3
   - C135 Sprocket shaft ——— G31 to the shaft
   - C118 Sprocket collar A *2
   - 0-C116 Sprocket gear assy.
   - CSS1.7X2.2 ——————— (SL)
   - C123 R-lever shaft — (SL) Tools 24000K-C123-A

   *1 After installed C136, check the vertical plays and function of Sprocket.
   Vertical plays less than 0.4mm Adjust by W8.
   *2 Take notice of direction.
   Flat face to the gear side in 0-C116

4. 0-C121 R-lever assy.
   - W6 t=0.2 (steel)
   - 0-C121 R-lever assy.
   - W2 (Ajd.) *
   - C132 R-lever spring
   - W2 t=0.3 ——— for the temporary use.
   - E130 Adjusting nut ——————— Tools 231K-E111-A

   * Vertical plays of the pointed end of 0-C121 must be less than 0.05mm. Adjust by W2.

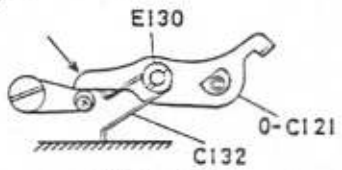


Fig. 24

5. Malti-exposure ratched adjustment
   1) At the condition R-lever does not hook with Sprocket shaft as shown in Fig. 25., the clearance between the pointed end of 0-C107 and Spool inner gear is in the range 0.2 - 0.5mm. Adjust it with C110 Eccentric collar.

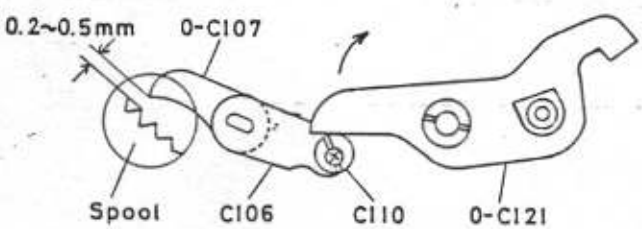


Fig. 25

2) At the condition R-lever hooked with Sprocket shaft, the pointed end of 0-C107 and the spool inner gear must engage surely, and C110 Eccentric collar and 0-C121 R-lever assy. must not touch, have a proper clearance.

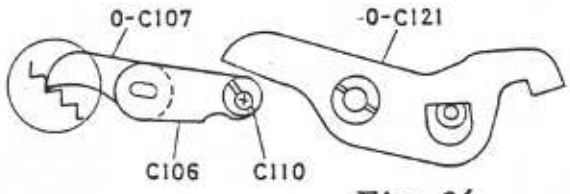


Fig. 26

If 1) and 2) are O.K., apply screw-lock on the retainer screw of C110.
* When fasten the retainer screw of C110, do not bend C106 Malti-exposure lever down to prevent C110 detaching from 0-C121.

° C111 Cover ——— Apply Plio-bond to adhesive

6. 0-C103 Bottom main gear assy.
° 0-C31 1st winding gear assy.
° W90 (Adj.)
° 0-C103 Bottom main gear assy.
° C105 Bottom main gear retainer screw —— Left handed (SL)
* Vertical plays of 0-C31 should be less than 0.1mm. Adjust by W90.

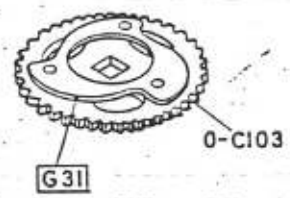


Fig. 27

7. A0-E401 Bottom shutter mech. plate assy.
° A0-E401 Bottom shutter mech. plate assy.
° CSS1.7X2
° E412 R-lever adjusting collar
° E413 R-lever adjusting collar retainer screw

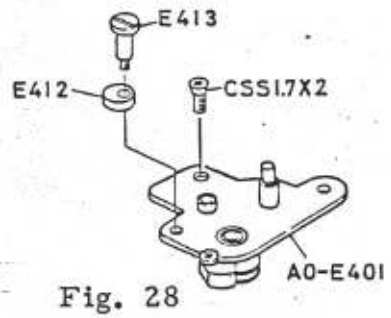


Fig. 28

8. 0-C124 Coupler lever assy.

- ° C126 Coupler lever positioning collar
- ° 0-C134 Coupler lever assy.
- ° W63 (Adj.) *
- ° C125 Coupler lever shaft —— G31
- ° C131 Coupler lever spring

* Vertical plays of the pointed end of 0-C124 Coupler lever assy. should be less than 0.3mm. Adjust by W63.
Check the function of 0-C124 after fixed with C125, before install C131.
The function of 0-C124 must be smooth and light, without catching.

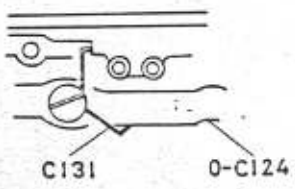


Fig. 29

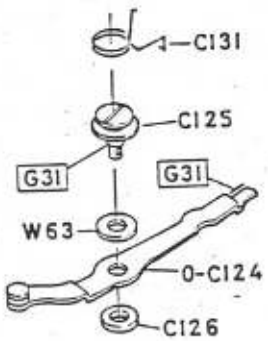


Fig. 30

9. A0-E101 Shutter mech. plate assy.

- ° A0-E101 Shutter mech. plate assy.
- ° CNM1.7X2.5 —————— (SL)
- ° E158 Mech. plate positioning screw —— (SL)
- ° E148 Reverse stopper rest —————— (SL)

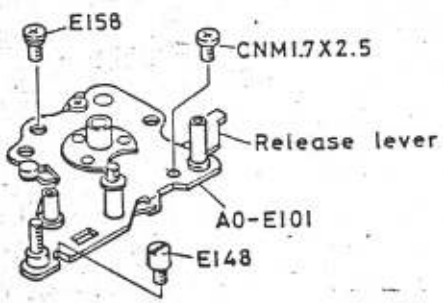


Fig. 31

After installed, check the function of release lever smooth or not.

10. E124 Reverse stopper

- ° E124 Reverse stopper
- ° E125 Reverse stopper nut —— Tools 24000K-E125-A
- ° E154 Reverse stopper spring

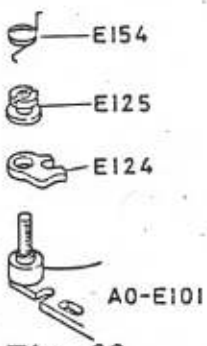


Fig. 32

Fig. 33

P. S. 1. The treatment of A0-E30 Shutter block and the detail order of assembly.
Refer to page 59.

11. A0-E30 Shutter curtain block assy.

Check both shutter curtains, no scratches, no stains, no bend and so on before install.

Do not touch with your bare finger when install. Take utmost care not to smear or scratch in the curtain surface.

- A0-E30 Shutter curtain block assy.
- CNL-D1.7X2 2pcs. ——— (SL)

1) After installed, 1st curtain strings, top and bottom hang into its own roller.
2) And after, set both Roller shaft as shown below to prevent detaching. Apply Screw-lock on the retainer screw of Roller shaft.

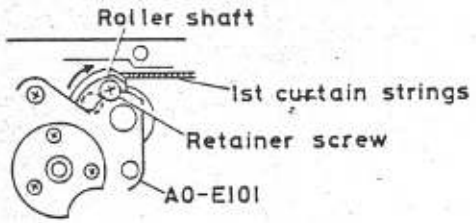


Fig. 34

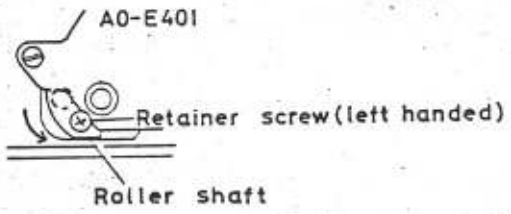


Fig. 35

12. E37 Curtain shaft rest

- E37 Curtain shaft rest
- W2 t=0.2
- CNSI.7X2.5 ——— (SL)
- A21 Curtain shaft rest retainer screw ——— (SL)

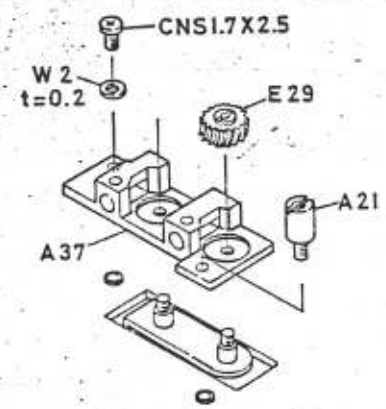


Fig. 36

13. E3 2nd curtain pinion
    - ° E3 2nd curtain pinion
    - ° CSM1.4X4 ——— (SL)

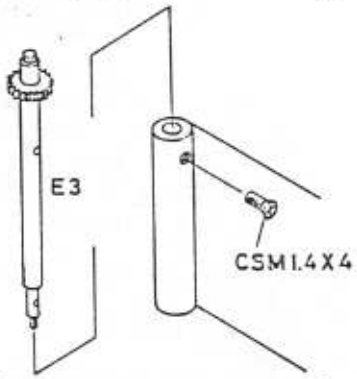


Fig. 37

* Take utmost care not to smear or scratch in the curtain surface. After installed, position 0-E1 1st curtain pinion and E3 2nd curtain pinion by using Tools 24000K-E301-A.

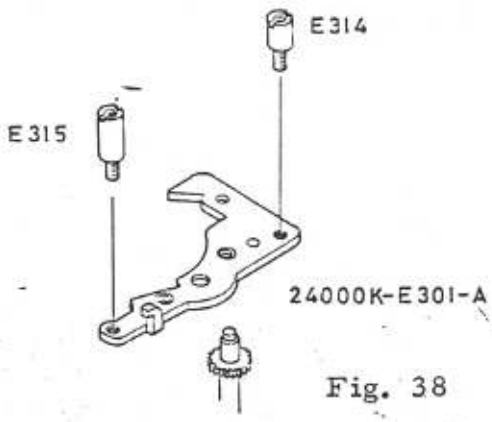


Fig. 38

14. Give the tension to the both shutter curtains.
    1) Wind up the both shutter curtains to each spring shaft.
    2) At the above condition, turn E29 Worm wheel clockwise to give the tension.
        1st curtain 3 turn
        2nd curtain 1 turn
    3) E26 Worm must be installed providing 1st and 2nd curtain with proper tension.
        ° E26 Worm 2pcs.

15. 2nd curtain wound position adjustment
    ° 0-E110 Bottom selector gear assy.

    1) Wind 2nd curtain clockwise, never wind counter clockwise due to shutter curtain bend, by using Bottom selector gear wind Tools 24000K-E110-A. *1
    2) Hook 0-E110 with 2nd curtain wound positioning Tools 24000N-A1, E128-A *2

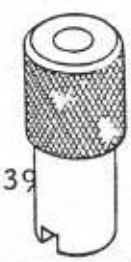


Fig. 39

24000K-E110-A

Fig. 40

24000N-A1.E128-A

3) At the condition of 2nd curtain hooked with, adjust the position of 2nd curtain edger.
A proper 0-E110 must be selected so that 2nd curtain edger meets the scribed line to secure off-set distance of 5.5mm

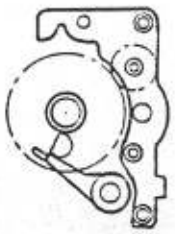


Fig. 41

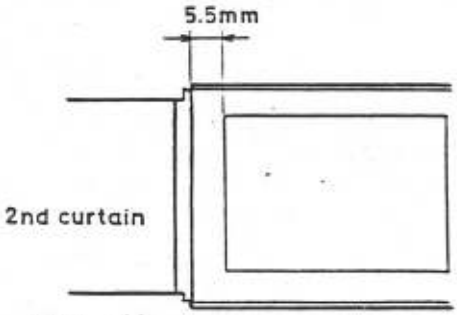


Fig. 42

After selected a proper gear, remove it. Apply G31 to the gear shaft and re-install to the proper gear position.

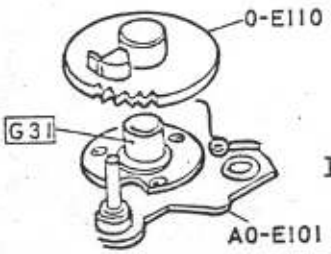


Fig. 43

16. Dismount Tools 24000K-E301-A
Take care not to release 2nd curtain when dismount 24000K-E301-A.

17. 0-E103 Top selector gear assy.
- 0-E103 Top selector gear assy. *
- 0-E108 Top selector gear retainer assy. *
- CSN1.2X3 ——— (SL)

* 0-E103 and 0-E108 must be assembled as illustrated below.
Take care about direction.

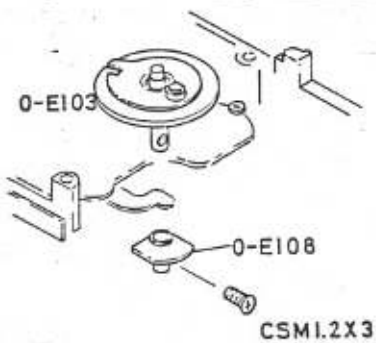


Fig. 44

18. 0-E301 Bounce lever seat assy.

0-E110 Bottom selector gear assy. must be held at the wound condition with Tools 24000N-A1, E128-A.

1) Set 0-E103 Top selector gear assy. to a proper released position *, as mentioned below.

* Released position of 0-E103

a. Brake plate assembled in 0-E103 is hitted with Brake lever assembled in 0-E301.

b. Brake lever is completely back to the hitted position against Bounce lever seat.

2) A proper engagement of Top selector gear and 1st curtain pinion assembled in 0-E1 must be made so that 1st curtain edger has a 0.1mm clearance from the 5.2mm scribed line.

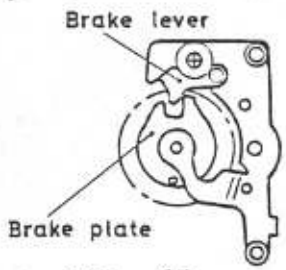


Fig. 45

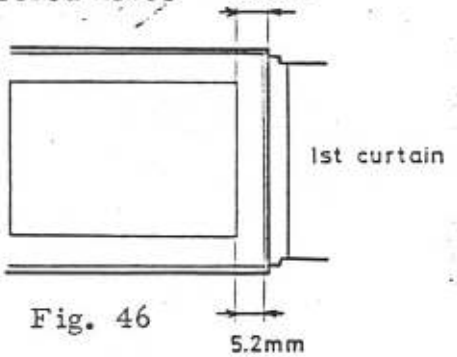


Fig. 46

3) Holding the engagement, 0-E301 Bounce lever seat assy. must be installed.

° W32 (Adj.) *
° 0-E301 Bounce lever seat assy.
° E314 Bounce lever seat retainer screw A
° E315 Bounce lever seat retainer screw B

* Vertical plays of 1st curtain pinion should be less than 0.1mm. Adjust by W32.

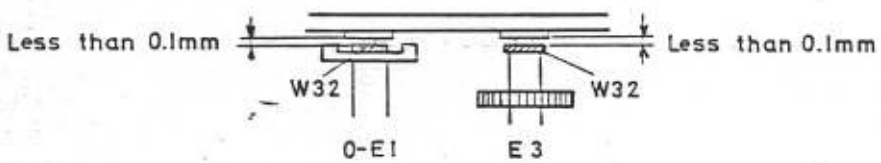


Fig. 47

19. E23 Coupler pinion
   - E41 Coupler pinion pin
   - E23 Coupler pinion
   - E32 Coupler pinion retainer nut

   * Do not release 2nd curtain while installing.
   1) E41 Coupler pinion pin must be fixed with Aron-alpha of a sufficient drop after installed into 2nd curtain pinion shaft.
   2) When fasten E32 Coupler pinion retainer nut, use Tools 24000K-E23, E32-A to hold E23 firmly, as shown below.

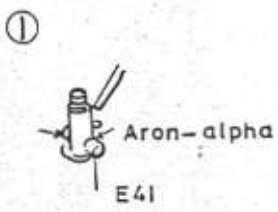


Fig. 48

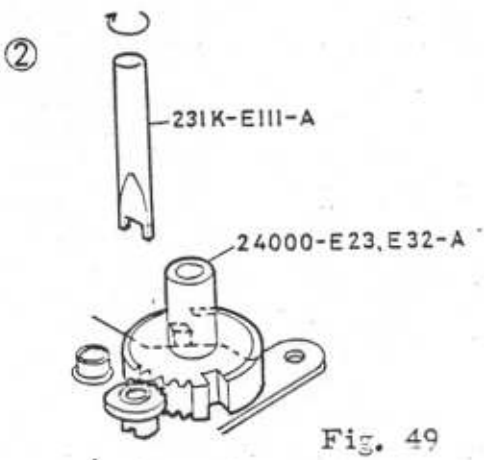


Fig. 49

20. Shutter curtain check
   1) Release 2nd curtain slowly while holding E23 with your finger.
   2) Making travel of the curtains by use Tools 24000J-E120-A, curtains must be checked for parallelism (edger-to-picture format, edger-to-scribed line). Edger-to-edger checks should be made at two points (start and end in the picture format) respectively.

Fig. 50

24000J-E120-A

   3) Hook both curtains at the wound position with Tools 24000K-E105, E120-A * for 1st curtain and 24000N-A1, E128-A for 2nd curtain.

   * 1st curtain must be hooked at 12.05R position of 24000K-E105, E120-A as shown below.

24000K-E105.E120-A
Fig. 51

Fig. 52

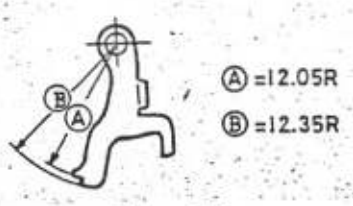


Fig. 53

4) At the Condition of 3), adjust and / or check edger-to-edger overlapping.
Adjust its overlapping of 3.7mm by moving eccentric screw in 1st custain pinion shaft.
Its overlapping can be checked with Tools 24000N-A1, E33, E35-A *,

* 24000N-A1, E33, E35-A
This tools is provided to measure the length of 3.8mm for edger-to-edger overlapping.
Therefore, at this moment edger-to-edger overlapping must be 0.1mm shorter than 3.8mm. 3.8mm overlapping will be made finally when Intermediate gears were installed.

24000N-A1.E33.E35-A

Fig. 54

When 3.7mm overlapping was adjusted by eccentric screw, certainly check 1st curtain parallerism.

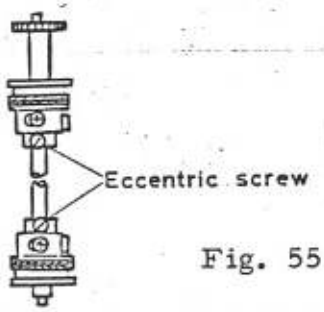


Fig. 55

After adjusted and/or checked, A200 Back cover assy. must be installed to protect shutter curtains.

21. 0-E113 Bottom intermediate gear assy.
How to install 0-E113 Bottom intermediate gear assy. are illustrated below.
° 0-E113 Bottom intermediate gear assy.

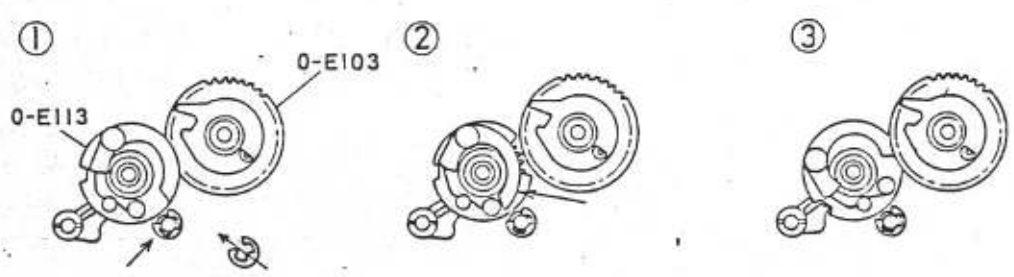


Fig. 56

22. 0-E120 Top intermediate gear assy. / Intermediate gear adjustment

° 0-E120 Top intermediate gear assy.

1) 0-E110 Bottom selector gear assy. must be hooked with Tools 24000N-A1, E128-A.
2) 0-E108 Top selector gear assy. must be hooked with Tools 24000K-E105, E120-A —— at the part of 12.35R.
3) Clearance of A shown below must be adjusted by changing 0-E120 Top intermediate gear assy.

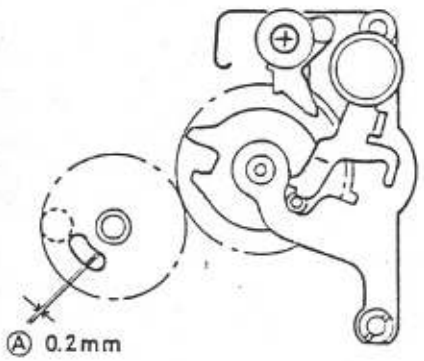


Fig. 57

Confirmation of adjustment

* The best position of High-speed pin assembled in 0-E103 Top selector gear assy. is located at 12.10R from the shaft hole of magnet warning lever.

12.05R part of Tools 24000K-E105, E120-A must be touched, not hitted, with High-speed pin in 0-E103

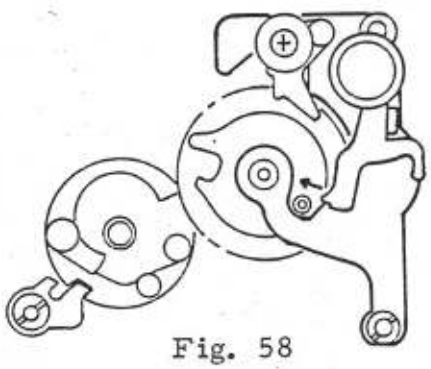


Fig. 58

After adjusted, re-confirm 3.8mm edger-to-edger overlapping finally

° E156 Intermediate gear retainer

° CNL-B1.4X2.5

23. 0-C35 2nd winding gear assy. / Ratched wheel position adjustment

Ratchet wheel position adjustment

Both curtains must be wound and hooked by using Tools 24000K-E103-A

1) Position 0-C124 Coupler lever assy. as shown below.

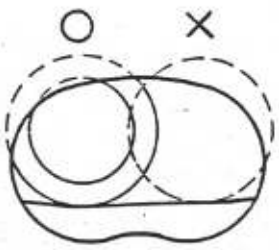


Fig. 59

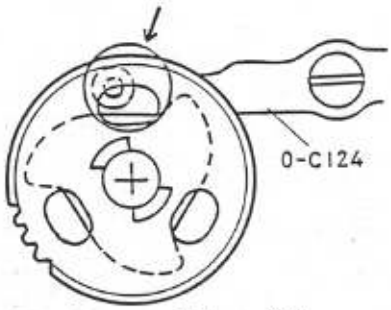


Fig. 60

24000K-E103-A

Fig. 61

2) Position of ratchet wheel should be positioned with Tools 24000J-C32-A.

At this condition, top end of 0-C124 should be located on the flat face of cam plate as shown in Fig. 60. If not, replace 0-C31 1st winding gear assy.

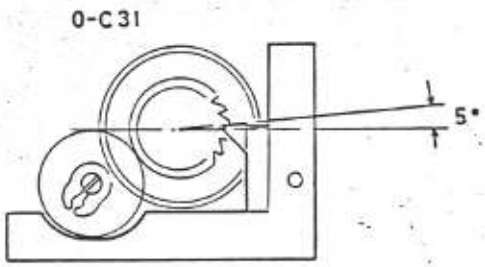
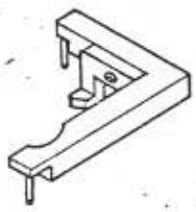


Fig. 62



24000J-C32-A

Fig. 63

3) At the above condition, 0-C35 2nd winding gear assy. must be installed, without slide the gear teeth of Bottom intermediate gear and 1st winding gear which engage with 0-C35.

- W3 t=0.3 Material —— Steel *
- 0-C35 2nd winding gear assy.
- C37 2nd winding gear shaft

* W3 t=0.3

Stick on 2nd winding gear shaft screw hole of body with Pliobond.

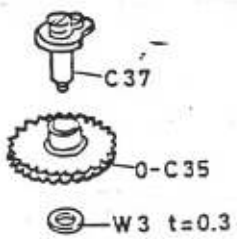


Fig. 64

The gear position of ratchet wheel must be inclined at about 5 degrees counter-clockwise against the body center, as shown in Fig. 62. The play of Wind lever, top end is decided by the quantity of this inclination.

Position of ratchet wheel must be checked at three places because of Coupling cam is consisted of three places.

At the condition 0-C35 2nd winding gear installed, winding can be done with Tools 24000K-C32-A.

Fig. 65

24000K-C32-A

24. 0-S4 Armature lever assy.

° 0-S4 Armature lever assy.
° S19 Magnet lever shaft collar
° W6 (Adj.) *
° LW15

* Vertical plays of Magnet lever shaft in 0-S4 must be less than 0.1mm. Adjust by W6.
This vertical play is affected the adsorption of magnet, uneven auto-shutter speed.

0-S4 Armature lever assy. must be smooth function, self-function.

° 0-E402 Coupler gear assy.

Matching S1 Armature lever and E403 2nd curtain hook plate, 0-E402 Coupler gear assy. must be installed.

2nd curtain hook adjustment.

1) At the wound condition
2) 0-E110 Bottom selector gear assy. must be hooked with Tools 24000N-A1, E128-A.
3) At the above condition, clearance of S1 Armature lever and E403 2nd curtain hook plate must be adjusted 0 (zero) by shifting E403.

Fig. 66

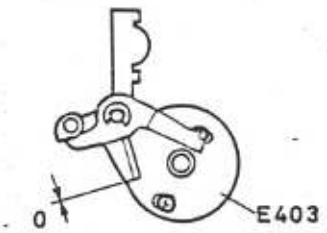


Fig. 67

4) Confirmation of adjustment
Remove Tools 24000N-A1, E128-A, and install 0-E128 High-speed lever assy. temporary.
Confirm two points as follows.
   a. When 2nd curtain was hooked with S1 and E403, 0-E128 must be move in and out smoothly, without catching.
   b. When dismounted S1 and E403 hooking, 2nd curtain must be hooked with 0-E128.

25. E407 Mirror seat restitution lever

- E407 Mirror seat restitution lever
- W70
- E408 Mirror seat restitution lever shaft

Check E407's function and vertical plays (less than 0.1mm).

- S16 Magnet lever spring *
- S21 Magnet lever spring silencer

* Put Plio-bond on the hooked part of S16.

26. 0-E410 Armature lever guide plate assy.

- 0-E410 Armature lever guide plate assy.
- CNS1.7X2.5
- CSS1.7X2.5

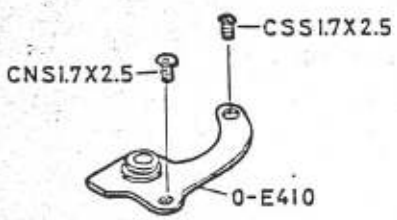


Fig. 68

Confirmation of function of High-speed lever, 2nd curtain hook lever and Bottom intermediate gear.

Install A0-C1 Winding seat assy. with 0-C38 Winding lever assy. and Tools 24000K-B000-A temporary.

High-speed lever, 2nd curtain hook lever and Bottom intermediate gear must be function sequently, as follows.

1) Wind up slowly. At first, High-speed lever moves in.
2) Secondly and a few moment later, 2nd curtain hook lever must moves in and hook 2nd curtain.
3) Thirdly and a few moment later, Bottom intermediate gear must be hooked with E124 Reverse stopper.

27. 0-C101 Bottom winding seat assy. / Parforation adjustment

1) Remove E130 Adjusting nut and W3 t=0.3.
2) Position a tooth of Sprocket as shown in Fig. 69.
   Right side face of tooth is align with the center of Sprocket.

- C303 Ball-bearing C
- W6
- C115 Idle gear B *1
- W32
- 0-C101 Bottom winding seat assy.
- E130 Adjusting nut
- C129 Cord holder *2
- CNS1.7X3X2

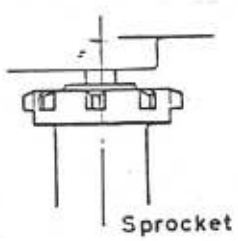


Fig. 69

*1 C115 Idle gear B must be installed, without slide the gear teeth of sprocket gear and bottom main gear which engage C115.

*2 C129 Cord holder is installed after finished the adjustment of parforation.

3) Position of perforation must be checked by using a test-film.
4) If the adjustment was not good, change the tooth.

Remove A0-C1 Winding seat assy.

28. A0-C1 Winding seat assy.

1) Back cover must be open.
2) Winding lever must be complete closed position, not pre-advance angle.

° C40	Counter dial release pin		
° A0-C1	Winding seat assy. *1		
° CNS1.7X3		———	(SL)
° C44	Winding seat retainer screw B	———	(SL)
° E155	Winding seat retainer nut		
° C42	Winding seat retainer screw A	———	(SL)
° C52	Counter dial set spring	*2	
° C47	Counter dial driving plate spring		

*1 Caution when A0-C1 Winding seat assy. is installed.

a. Pre-advance angle adjustment
Click weight of pre-advance angle must be adjusted by screwing Set F1.4X1.6.

Tolerance ..... Max. less than 1 Kg/cm
Min. Wind lever must stop at pre-advance angle position when it released from the 1st corner of 0-A301 Top cover A assy.

Fig. 70

Reference:
If 1 1/2 screw threads come out from the surface of base plate, out-torque of Wind lever will be 300 g/cm and in-torque will be 700 g/cm.

b. Before install, C10 Counter driving lever retainer must be positioned as shown in Fig. 71.

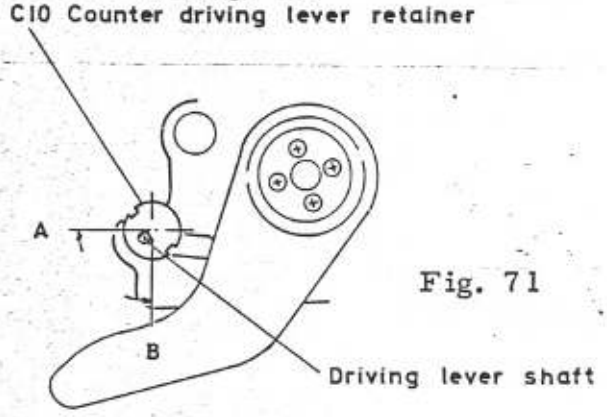


Fig. 71

Set between 30 - 60 degrees.

c. At the wound condition, A0-C1 Winding seat assy. must be installed as gearing with C135 Sprocket shaft and mill-cut in Driving lever shaft.

d. After installed, Driving lever shaft must be in the range between A and B.

*2 Position of installation of C47 and C52.

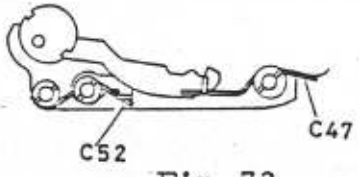


Fig. 72

29. 0-H000 Self-timer / Self-release position adjustment

- 0-H000 Self-timer *
- CNM1.7X2.5 ——— (SL)
- A28 Cord holder
- CNS1.4X2.5 ——— (SL)

* 0-H000 Self-timer must be pushed toward the top when install.

Self-release position adjustment

On the releasing of Self-charge, self-release must stop when made the clearance of about 0.2mm between the top end of Self hook lever and Self charge cam.

Adjustment can be done with eccentric screw in Self hook lever as shown in Fig. 73.

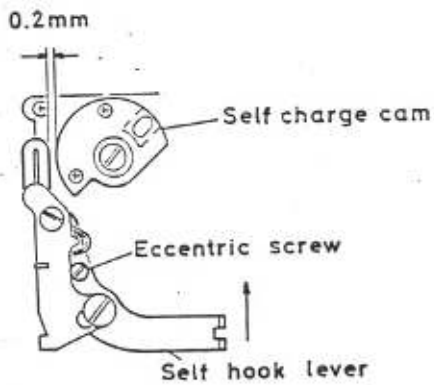


Fig. 73

* When your finger let go from Shutter button after released Self-charge, Shutter rod return a little to upper direction. Then small vibrations will be occured on Shutter rod. But, Self-release must not stop by such vibrations.
This adjustment is provided to prevent such defect.

30. 0-A11 Shutter curtain light seal assy.

- 0-A11 Shutter curtain light seal assy.
- CNS1.7X1.6 ——— (SL)

Take care about the clearance between 0-A11 and the body proper.
——— to affect the function of 0-B2 Mirror seat assy. and B206 Focusing plate holder.

31. A501 Shutter rod
- ° A507 Shutter rod spring
- ° A501 Shutter rod
- ° A505 Mirror release plate
- ° CNM1.4X2 2pcs.
- ° A506 Self-charge release plate
- ° CNM1.4X2 2pcs.
- ° A502 Bulb actuating plate
- ° CSM1.4X2

32. E310 Magnet warning lever
- ° E313 Magnet warning coupler lever
- ° CNL-D1.4X2.2
- ° W1 t=0.3
- ° E310 Magnet warning lever
- ° W6 (Adj.)
- ° E311 Magnet warning lever shaft
- ° E316 Magnet warning lever spring *

* Position of installation

Fig. 74

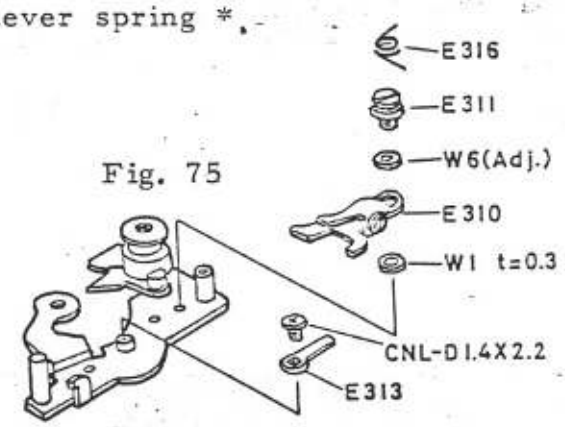


Fig. 75

33. Function order in winding process
Hook levers must be functioned sequently when wind slowly, as mentioned below.
1) Winding must stop immediately when 0-E110 Bottom selector gear assy. is hooked with Tools 24000N-A1, E128-A.
2) At this moment S1 Armature lever and E403 2nd curtain hook plate must not hook. If hooked, re-adjust the position of E403
3) And further winding, S1 and E403 must hook. At this moment 0-E113 Bottom intermediate gear assy. must be not hooked by E124 Reverse stopper.
If hooked, re-adjust the position of 0-E120 Top intermediate gear assy.

4) And further winding, 0-E113 must be hooked by E124. At this moment Brake plate assembled in 0-E103 and C1 Winding seat must have about 0.2mm clearances.
If the clearances are less, fill off C1 Winding seat of adequate quantities.
If the clearances are more, replace A0-C1 Winding seat assy.

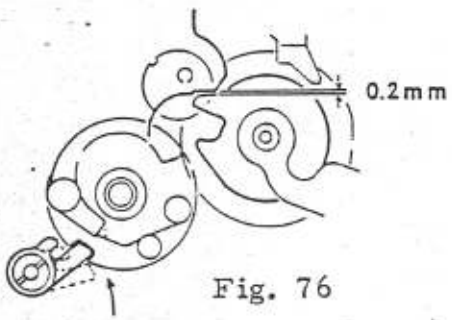


Fig. 76

5) Between High-speed pin in 0-E103 and 0-E301 Bounce lever seat assy. must have more than 0.1mm clearance when Brake plate in 0-E103 hitted with C1 Winding seat as shown below.

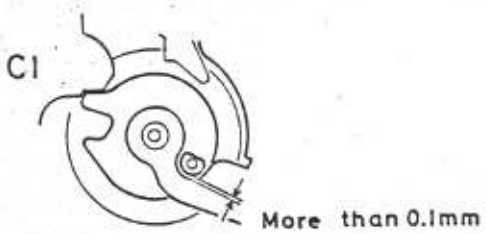


Fig. 77

34. Magnet warning adjustment
A and B clearances must be adjusted and/or checked, as follows.

A —— 0.3 - 0.4mm If it was out of tolerance, re-adjust the position of Intermediate gear.
To check, un-hook 0-B91 FP switch lever assy. and S5 Magnet lever.

B —— 0.3 - 0.4mm
Adjust the clearance by adjusting screw as shown in Fig. 78
Check it on the winding.
Apply Screw-lock on adjusting screw.

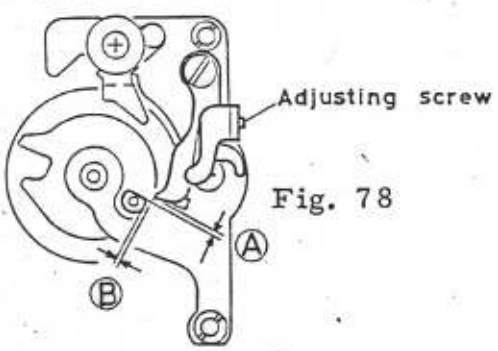


Fig. 78

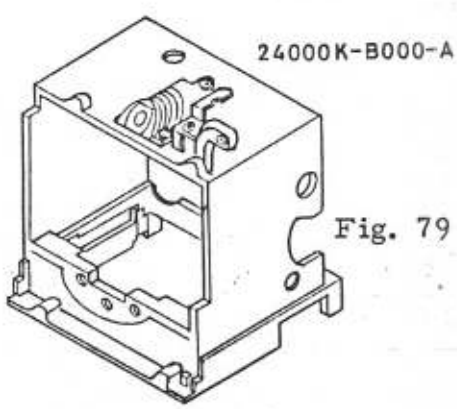


Fig. 79

Remove Tools 24000K-B000-A.
Check the function of Light seal plate for DATA LX

35. 0-B000 Mirror housing complete assy.
- ° 0-B000 *
- ° CNM1.7X5
- ° CSS1.7X3 2pcs.

* Install 0-B000 Mirror housing complete assy. at the condition mentioned below.
1) Shutter ———— at the wound condition
2) Mirror housing ——— at the released condition (Mirror seat flip up completely)

Caution when install
- ° When fasten retainer screws, be sure Mirror housing and the body proper parallel with. —— to affect B206 Focusing plate holder function.
- ° Coupling of hook pin in 0-B59 and Self-timer hook lever.

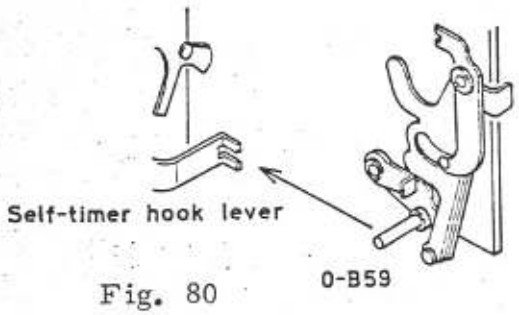


Fig. 80

After installed 0-B000, check 1) - 6) as follows.
1) Self-timer hook plate pin must be coupled into the slot of Self-timer hook lever.
2) A505 Mirror release plate must be located on B57 Hook lever driving lever.
B57 must moves smoothly when Shutter rod is moved up and down.

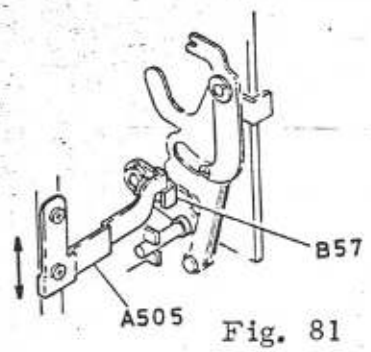


Fig. 81

3) 0-B91 FP switch lever assy. must be located outside of S5 Magnet lever.
4) E407 Mirror restitution lever must be located inside of 0-B76 Restitution lever hook plate assy. as shown in Fig. 82.

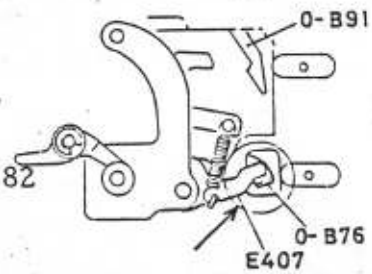


Fig. 82

5) B206 Focusing plate holder must move smoothly.
B206 without L02 must drop completely from the hooked position by its self-weight.
If the function was bad, re-install 0-B000.

6) B clearance of E310 Magnet warning lever. Refer to No. 33

If 1) - 6) are good, release the shutter several times. And check the function of Shutter and Mirror housing.

36. Adjustment of charge-stroke of Mirror housing.
Winding up slowly, confirm the moment which 0-B69 Restitution lever assy. was hooked with 0-B76 Restitution lever hook plate assy. After this moment, 0-B69 must be moved up 0.2mm (over-charge quantity) more.

Adjust its over-charge quantity (0.2mm) by changing B72 Mirror-charge column collar. There are three kinds of B72 as shown below.

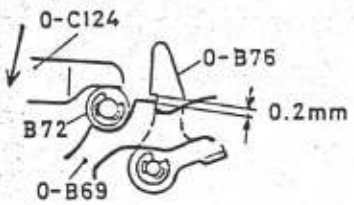


Fig. 83

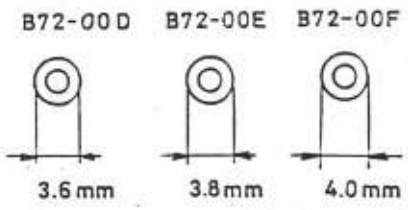


Fig. 84

37. Bottom release stroke adjustment
1) Preparation
° Comparator
° Dial gauge
° Dial gauge, bit
° Camera rest *
2) Install A400 Bottom cover assy. to the body proper.
3) Put the camera body on the camera rest.

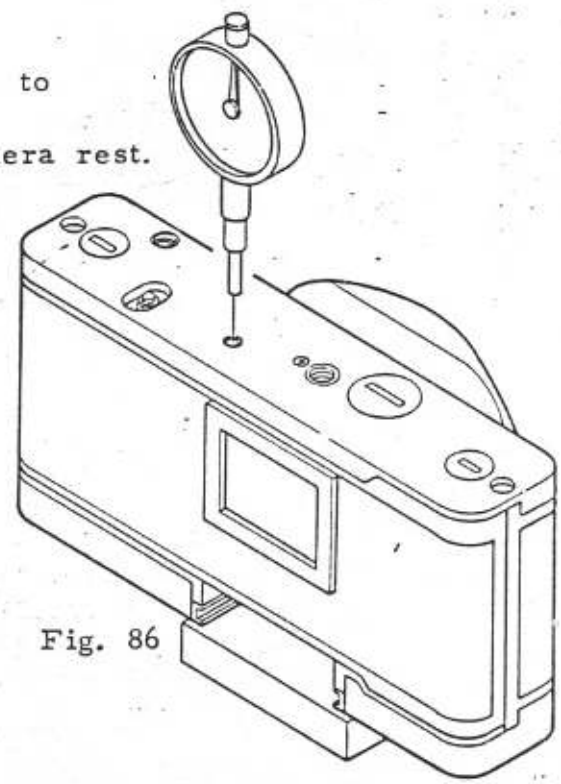


Fig. 86

* Camera rest

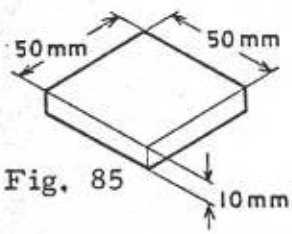


Fig. 85

4) Measure the bottom release stroke by using Dial gauge.
Shutter must be released at when Bottom release pin was pushed in the range of 0.85 - 1.15mm deep from the bottom cover surface.
5) If it was out of range, replace to 0-E416-00C as shown below.

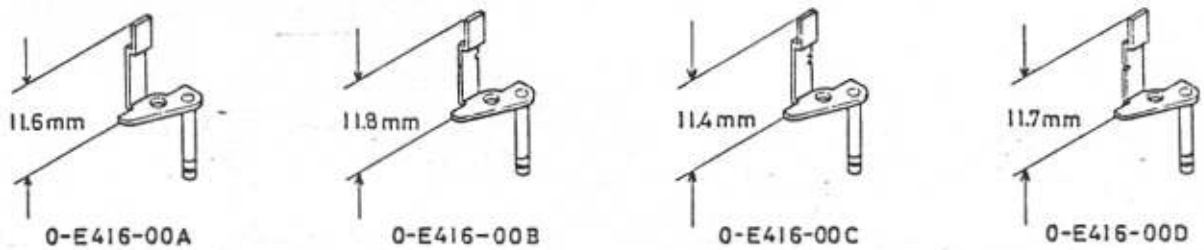


Fig. 87

38. A0-E201 Shutter speed selector dial seat assy.
- 0-E128 High speed lever assy.
- E151 Bulb lever spring
- 0-E127 Bulb lever assy.
- 0-E206 High speed cam assy.
- W1.8X2.5
- A0-E201 Shutter speed selector dial seat assy. *
- CSS1.7X2.5
- CNL-D1.7X2.2
- CNL-D1.7X4

* Caution when install
1) Shutter dial must be AUTO position.
2) Take utmost care about the gearing of match-needle gears.

B227 Bobbin hook lever must be sure to unhook from the gear teeth after installed A0-E201. Retainer screw of B227 is left-handed screw.

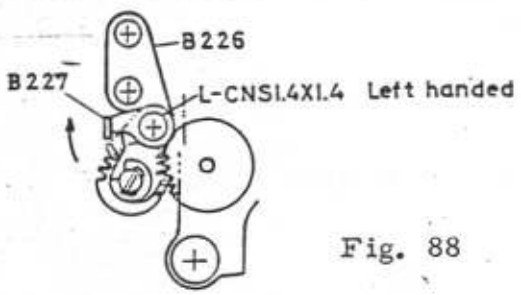
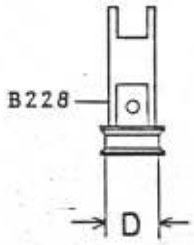


Fig. 88

After unhooked, turn Shutter dial from AUTO to B position.
The function of Match-needle (Blue-needle) must be checked at the same time.

39. Positioning of Match-needle
Match-needle indication in the finder must be coincided with the setting of Shutter dial.
—— It is acceptable that Match-needle is slight overlap with next figure, but Match-needle indication must be located its position which can judge clearly.
Match-needle indication can be adjusted by eccentric screw in 0-B230 Bobbin driving gear assy. at Shutter dial setting 1/30 or 1/15 sec.

If the movement of Match-needle does not coincide against the movement of Shutter dial, replace B228 Bobbin for a proper adjustment.



	D
B228-00A	31.5mm
00B	32.0
00C	32.5

Fig. 89

40. Adjustment of 1st curtain start position
Shutter dial must be set at B (Bulb) position.

1) Holding Mirror seat by your finger, release the shutter.
2) Slowly moving up Mirror seat.
3) Confirm 1st curtain start position by its Mirror seat position.

1st curtain start position Max. —— 1mm belower from B90 Mirror shock absorber.
Min. —— At the same height of Ⓐ as shown below.

Its position must be adjusted by eccentric screw.

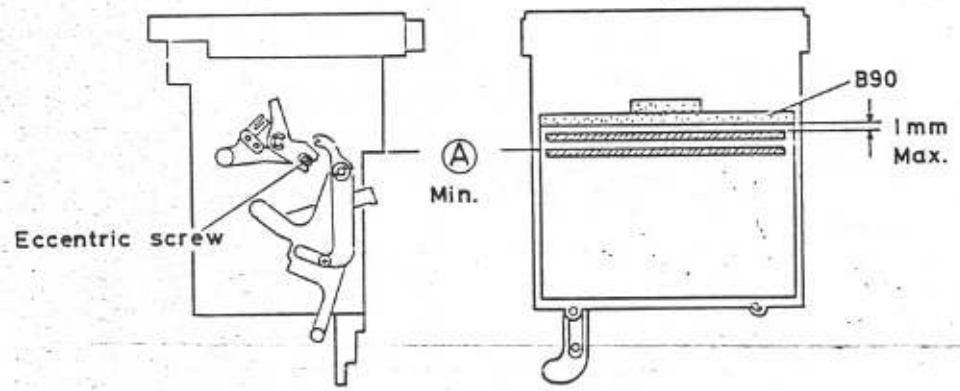


Fig. 90

Apply Aron Alpha of a sufficent drop on eccentric screw after adjusted.

41. Adjustment of R-shaft position
Shutter dial must be set at B (Bulb) position.

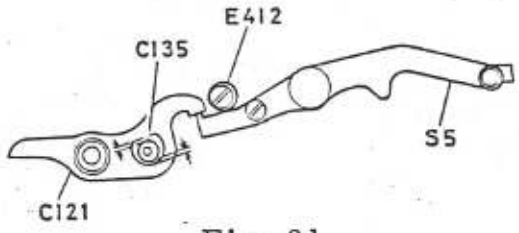


Fig. 91

1) Release the shutter and keep the condition of Mirror seat flipping up.
2) C135 Sprocket shaft must have the same clearance around D hole in 0-C121 R-lever assy. at the condition S5 Magnet lever pushing against 0-C121, as shown above.
3) Its clearance must be adjusted by E412 R-lever adjusting collar (eccentric collar).

42. Confirmation of Malti-exposure's function
1) Place the test film in the body.
2) Wind the shutter, and release at B position.
3) Describe the line on the test film by pencil along with picture format.
4) Push C135 Sprocket shaft downward until hooked.
5) Wind the shutter again, and release. At this time, confirm the picture frame which described the line remains the same place.
6) C135 Sprocket shaft must be back up to the original position at the next winding.

43. Bottom release restriction adjustment.
Bottom release which using for Motor drive LX and Winder LX is done by pushing E417 Bottom release pin.
1) E417 Bottom release pin can push only when the winding completely finished. When E417 Bottom release pin was pushed in, shutter must be released.
E417 must be able to push in smoothly, without catching.
2) E147 never push before the winding and/or on the winding.

Position of S12 Safety lever must be adjusted by S7 Eccentric collar as satisfying 1) and 2) mentioned above.

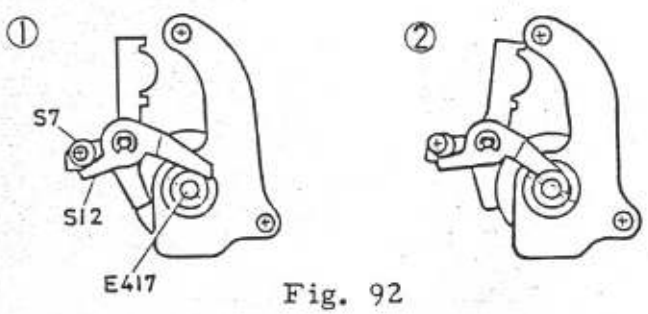


Fig. 92

Apply red-lacquer on the retainer screw (CNS1. 4X2. 2) of S7.

44. Adjustment of mechanical shutter speed.

Adjustment procedures are the same as the former type of camera.

1) Curtain speed

At 1/1000 sec 10.2 $\pm$0.2 ms

(2nd curtain speed must be the same or slightly slower than 1st curtain speed.)

2) Shutter speed.

a. Adjust shutter speed at 1/125 sec.

Shutter speed at 1/125 Nominal 7.81 ms

b. Confirm shutter speed at 1/1000 sec. and 1/2000 sec.

c. If shutter speed at 1/1000 sec. is not in tolerance, replace 0-E206 High speed Cam assy. *

d. If the adjustment can not accomplished by replacing 0-E206 High speed cam assy., replace 0-E128 High speed lever assy.

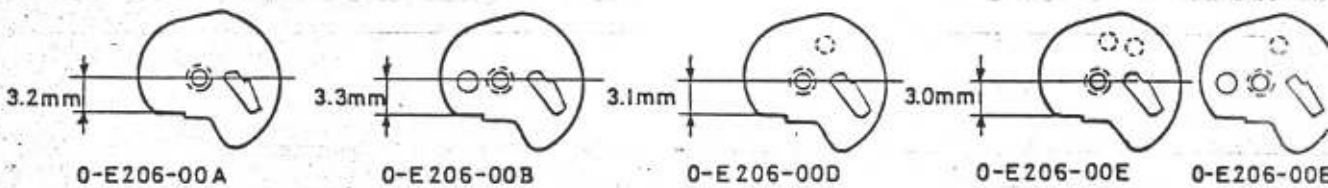
	Standard	Tolerance in servicing	Mirror up
1/2000 sec.	0.488 ms	0.28 - 0.85	(0.24 - 1.01)
1/1000 sec.	0.976 ms	0.56 - 1.70	(0.54 - 1.76)

(The difference between 1/1000 sec. and 1/2000 sec. must be more than 0.3 ms.)

1/125 sec.	7.81 ms	4.49	- 13.6
X		13.3	- 16.0

Shutter speed must be adjusted as close as possible to the standard's when adjust.

* 0-E206



Fig, 93

* 0-E128 -00A - -00C

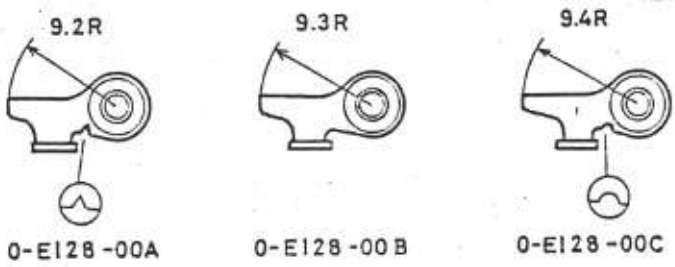


Fig. 94

e. 1st curtain bounce

Shutter dial must be set at X position.

If 1st curtain bounce is occuring, 0-E301 Bounce lever seat assy. must be replaced.

45. 0-I202 Timing switch p.c. board base plate assy.
Remove C38 Winding lever before install 0-I202.
° 0-I 202 Timing switch p.c. board base plate assy. *
° CNSl. 4Xl. 6 3pcs.
* Timing switch contact pin in 0-I 201 Timing switch p.c. board assy. must be clean before install.

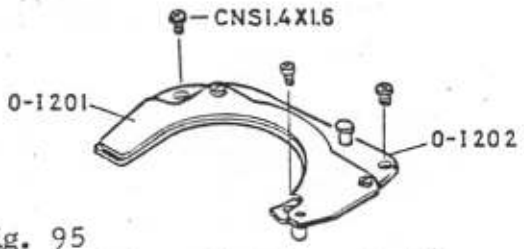


Fig. 95

46. Soldering on 0-I 201

Fig. 96

Four lead wires in the right side must arrange in order.

47. 0-C4 Counter dial assy.
Open Back cover
° C21 Counter dial indicator
° CNL-Bl. 4Xl. 4
° 0-C4 Counter dial assy. *1
° C7 Counter dial retainer nut —— Tools 24000K-C7-A *2
*1 Installing position of Counter dial spring and confirmation of 0-C4's function.
1). Counter dial spring must hang on C44 Winding seat retainer screw B by turning about 90 degrees closkwise.
2) At this time, Counter dial must be set at OFF-set position (2nd dot from 0).
3) Counter dial must turns smoothly, advance and return, after fastened 0-C4 by C7 Counter dial retainer nut.

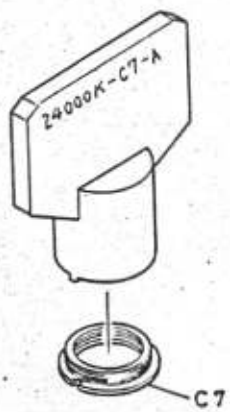


Fig. 97

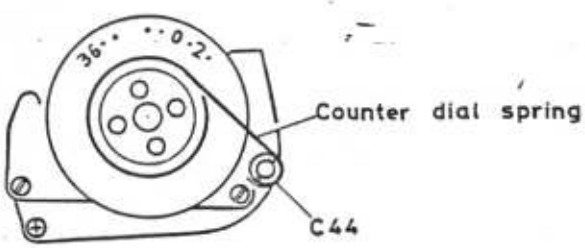


Fig. 98

Confirmation of Counter dial function

1) Close Back cover, and install Winding lever temporary.
2) Counter dial must be advanced surely one by one in each winding. And must be returned completely until OFF-set position when Back cover opened.

At the same time, position of C21 Counter dial indicator must be adjusted.

48. 0-E160 Timing switch pin assy.

- 0-E160 Timing switch pin assy. *1
- E164 Timing switch contact lever washer
- E163 Timing switch contact lever *2
- E162 Timing switch contact lever spring *3
- E165 Contact lever retainer nut

—— Tools 231K-E111-A

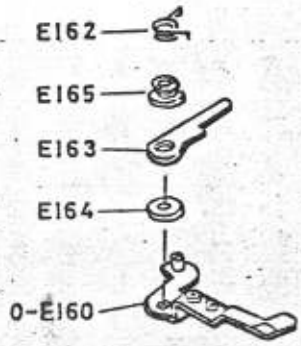


Fig. 99

*1 □ square hole in 0-E160 must be fitted with □ square shoulder of lever shaft.

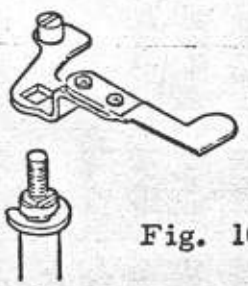


Fig. 100

*2 The side face which contact with Timing switch contact pin must be clean.

*3 Installing position of E162

Fig. 101

49. 0-I 251 Auto-manual switching lever assy.
Shutter dial must be set at 1/60 sec.
Contact pieces and base plate must be clean before install.
- 0-I 251 Auto-manual switching lever assy.
- I 252 Switching lever shaft
- I 255 Switching lever spring

After installed, check the position of Contact pieces whether contact in the center part of land in 0-I 201. If not, move 0-I 201 Timing switch p. c. board assy.

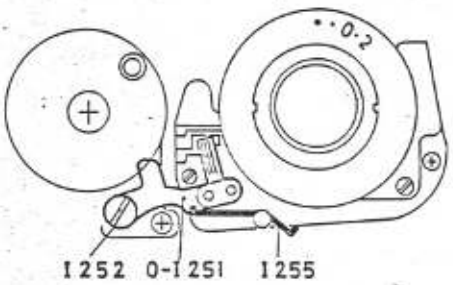


Fig. 102

50. Function of 0-I 251 Auto-manual switching lever assy.
When the setting of Shutter dial mentioned below was changed, the ground and each land is sure to switch.
(Shutter dial must turns both direction for sure check.)

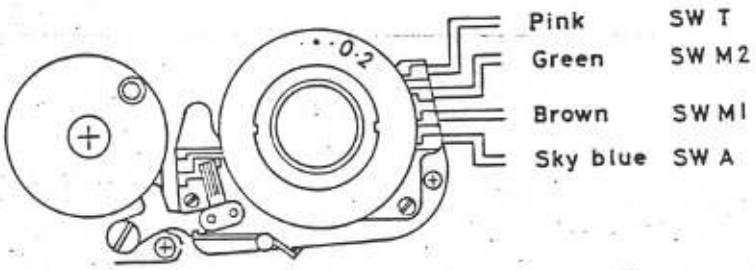


Fig. 103

1) Prepare circuit tester, and connect ⊖ terminal of circuit tester with the body ground.
2) Connect ⊕ terminal of circuit tester with sky blue lead wire.
   Shutter dial AUTO position 0 Ω ..... SWA ON
   Shutter dial 2000 ∞ ..... SWA OFF
3) Connect ⊕ terminal of circuit tester with brown lead wire.
   Shutter dial 2000 - X position 0 Ω ..... SWM1 ON
   Shutter dial 60 ∞ ..... SWM1 OFF
4) Connect ⊕ terminal of circuit tester with green lead wire.
   Shutter dial 60 position 9K Ω ..... SWM2 ON
   graually change
   4S 200K Ω ... SWM2 ON
   B ∞ ... SWM2 OFF
5) Connect ⊕ terminal of circuit tester with pink lead wire
   Before wind ∞ ... SWT OFF
   After wind 0 Ω ... SWT ON

51. S100 Magnet / Positioning

- ° S100 Magnet
- ° CNL-D1.7X3.5 2pcs. —— (SL)

Positioning of S100 Magnet

Contact surface of armature and magnet core must be clean.

Adjustment of magnet warning lever must have been finished.

At the wound condition

1) Provide D.C. 2.0V to S100 Magnet, and adsorb Armature and Magnet core.
2) S5 hook part in 0-B91 FP switch lever assy. and S5 Magnet lever must be made 0 (zero) condition by shifting S100 Magnet.
   —— S5 Magnet lever must be slightly drop (about 0.2 - 0.3mm) when the hook of 0-B91 and S5 come off by shifting 0-B91 to the arrow direction as shown below.
   —— When 0-B91 and S5 come to hook, 0-B91 must push slightly to the hook part.

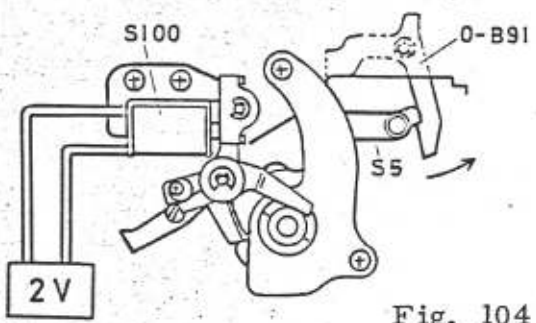


Fig. 104

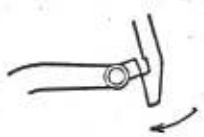


Fig. 105

Confirmation of adjustment

1) Shutter dial must be set AUTO.
2) Wind the shutter at the condition Power switch of Regulated D.C. power supply OFF.
3) Turn on Power switch of Regulated D.C. power supply, and release the shutter.
   At this moment, Shutter must be stayed Open. (Time exposure).
   Check several times by changing the camera direction.

If the magnet warning is acted at this confirmation, re-adjust the position of S100 Magnet.

52. Adjustment of 2nd curtain hooked amount

Hooked amount of S1 Armature lever and E403 2nd curtain hook plate must be adjusted by changing S6 Armature lever adjusting screw.

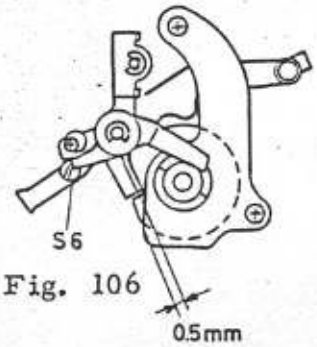


Fig. 106

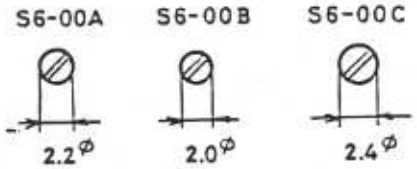


Fig. 107

After adjusted, install Tools 24000K-A401-A to protect S100 Magnet.

53. T-adjuster

(1) Adjustment

a. Shutter dial must be set at AUTO position.

b. Mount T-adjuster cord TA-240 to T-adjuster. And connect the connection cord of TA-240 to the relative lead wires, as shown below.

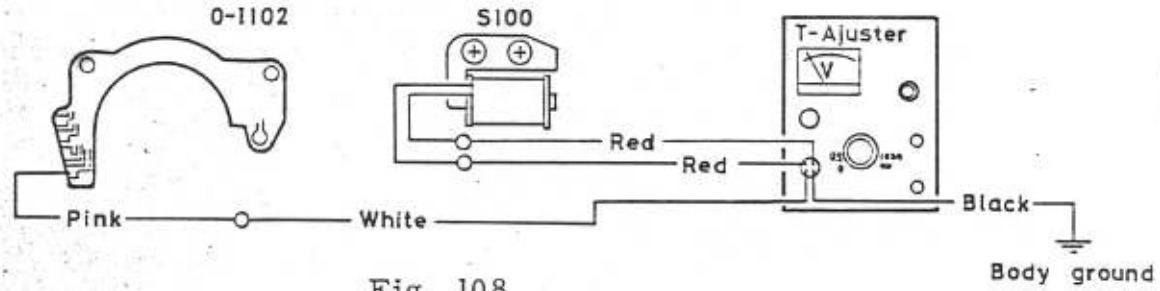


Fig. 108

c. Set MEASURE -CHECK switch in T-adjuster at CHECK side. And set the voltage 2V.
At the above condition, release the shutter. Shutter must be stayed Open.
If not, re-adjust the position of S100 or replace S100.

d. Set MEASURE-CHECK switch at MEASURE side. And set the voltage 2.8V.

e. Set Time-selecting dial at 0.98 ms.

f. Release the shutter. Shutter speed must be adjusted 0.98 ms by eccentric screw in 0-E160 Timing switch pin assy.

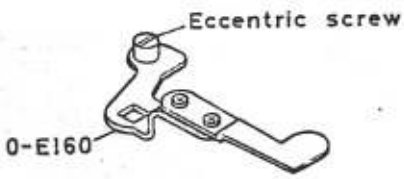


Fig. 109

(2) Confirmation

1) Release the shutter at the condition Mirror up.
It is acceptable if the shutter speed at Mirror up is 0.2 - 0.3 ms slower than 0.98 ms.

* If the shutter speed difference between the conditions - usual and Mirror up - is greater than 0.4 ms, repair it by the point mentioned below.

Cause of the greater difference

At the mirror up condition, 1st curtain starts quicker than the usual condition. So that its shutter speed is getting slower, especially at 1/2000 sec. and 1/1000 sec.

How to repair and/or adjust.

To make delay 1st curtain start forcibly, get brake on 1st curtain pinion. E42 1st curtain pinion brake spring is provided exceptionally to brake 1st curtain pinion.

Adjust it in the proper speed difference by sliding the installing position of E42, as follows.

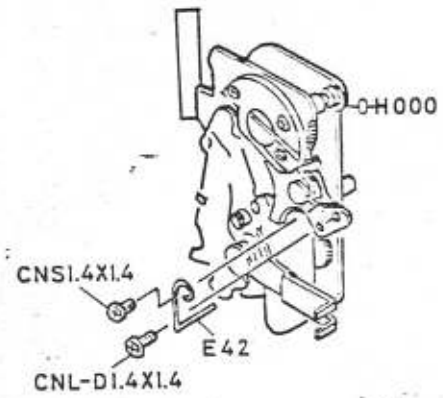


Fig. 110

a. E42 must be installed onto 0-H000 Self-timer, and fasten with CNS1. 4X1. 4 temporary.
b. Position E42 by CNL-D1. 4X1. 4 at the condition the top end of E42 has 0. 3mm clearances between the base plate of 0-H000, as shown below.
E42 must be installed vertically and not bent against the base plate.

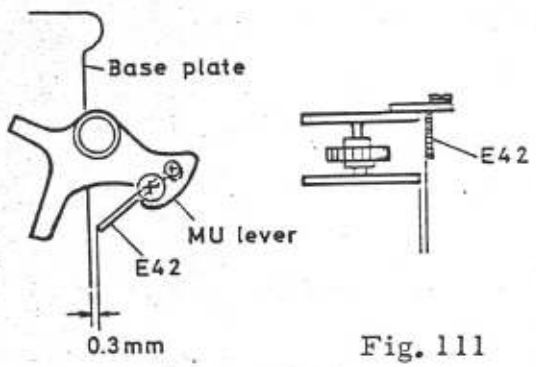


Fig. 111

c. Check the speed difference at 0. 3mm clearances. If good, fasten CNS1. 4X1. 4.
d. If need adjust more, adjust by changing the position of E42.
e. Apply Screw-lock on both retainer screws.

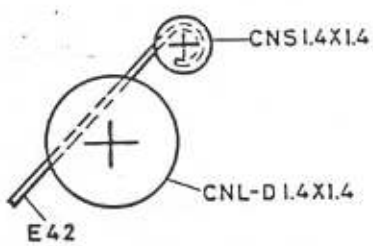


Fig. 112

2) Set Time-selecting dial at 0.49ms
Release the shutter. Shutter speed must be 0.49ms or close.
3) Set Time-selecting dial at 1.95ms.
Release the shutter. Shutter speed must be 1.95ms or close.

If a proper shutter speed can not get, replace 0-E206 High speed cam assy. and/or check the adjustment of Intermediate gear, 2nd curtain hook and the relative parts.

4) Set Time-selecting dial at 0ms.
Release the shutter. Shutter curtains must travel completely, without act of Magnet warning.
5) Release the connection between T-adjuster and the body, and set at Mirror up condition.
Magnet warning must act when release the shutter at AUTO position.

*Shutter speed tolerance at 1/1000ms, at the condition-usual and Mirror up.

Tolerance

		usual	Mirror up
1/1000sec.	0.98ms	0.80 – 1.20ms	0.70 – 1.48ms

Besides, Speed differences of usual and Mirror up must be less than 0.35ms.

Apply Aron Alpha of a sufficient drop on eccentric screw in 0-E160.

54. Shutter release strock adjustment
Shutter dial must be set at B (Bulb) position.
1) Dial guage bit must be replaced Dial guage bit, long, as shown below.

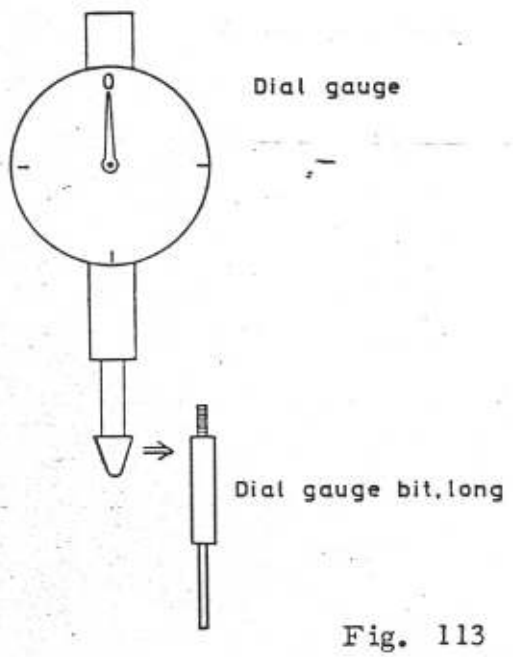


Fig. 113

2) Setting of dial gauge

. Dial gauge must be set to check 6mm deep strokes from the top surface of E315.

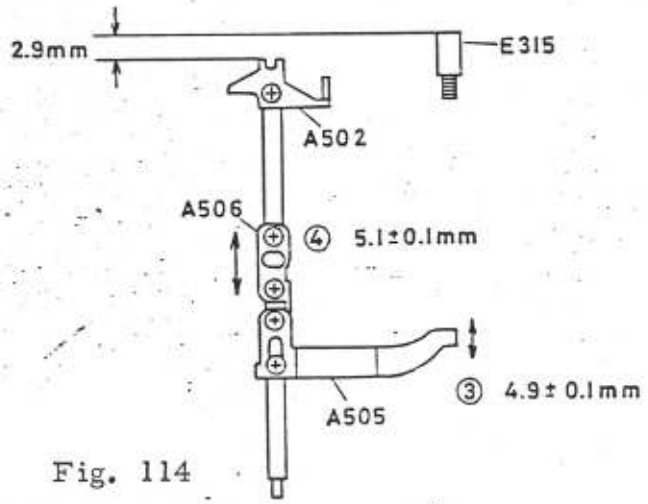


Fig. 114

3) Release stroke adjustment

4.9 ±0.1mm from the top surface of E315.

Adjust its stroke by shifting A505 Mirror release plate, up and down.

4) Self-release stroke adjustment

5.1 ±0.1mm from the top surface of E315.

Adjust its stroke by sliding A506 Self-charge release plate.

5) Shutter rod must be pushed downward more than. 0.1mm after Self-timer was released.

Final adjustment of thoes strokes is provided after Top cover was installed.

55. I300 Power switch block switching stroke adjustment

Motor drive synch. switch	(SW MDS)	Green	Ground
FP switch	(SW FP)	White	Ground
Power switch	(SW P)	Red	Blue
Motor drive trigger switch	(SW MDT)	Orange	Ground

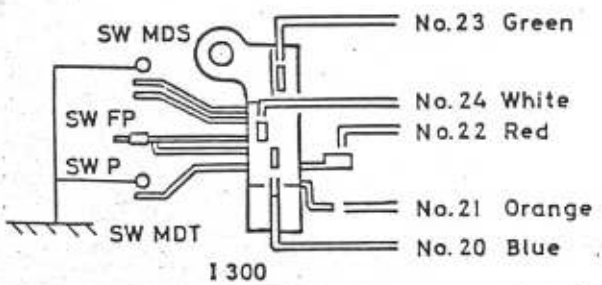


Fig. 115

1) Before and after winding
All of switches must be OFF.

2) SW P and SW MDT ON stroke adjustment

a. SW P ON stroke adjustment
Red and Blue lead wire in I 300 must connect with the circuit tester terminals.
SW P must be ON at 3.7 $\pm$0.1mm deep strokes from the top surface of E315, when Shutter rod pushed down gradually.
Adjust it by bending the contact piece of Power switch, as shown below.

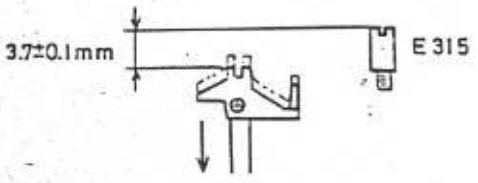


Fig. 116

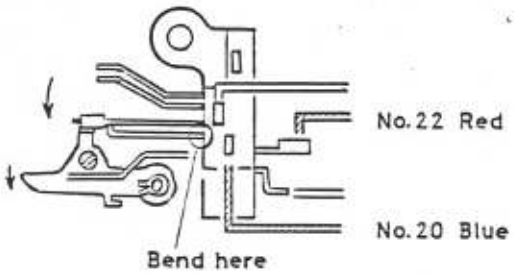


Fig. 117

b. SW MDT ON stroke adjustment
Orange lead wire in I 300 and the body ground must connect with the circuit tester terminals.
SW MDT must be ON at 3.9 $\pm$0.1mm deep strokes from the top surface of E315, when Shutter rod pushed down gradually.
Adjust it by turning eccentric screw in 0-B95 Power switch lever assy.

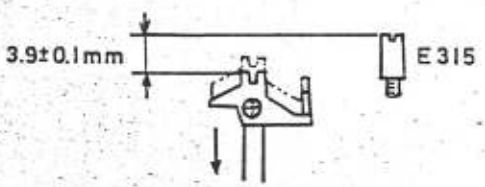


Fig. 118

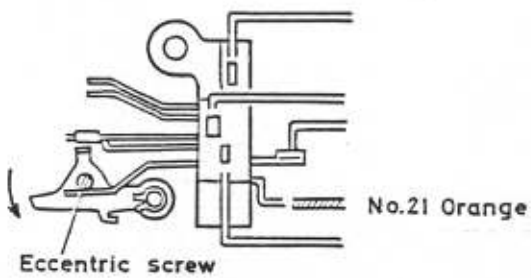


Fig. 119

3) SW MDS and SW FP ON order

a. Shutter dial must be set at B.
Holding Mirror seat by your finger, release the shutter.

b. Bring up Mirror seat gradually, and confirm the ON position of SW MDS and SW FP.

At first, SW MDS must be ON.
Green lead wire ——— Ground
Secondly, SW FP must be ON.
White lead wire ——— Ground

56. X, FP time-lag adjustment

1) X time-lag

Gray lead wire in I 102 X contact piece B and the body ground must connect with the synchro-terminals of Shutter speed tester.
Shutter dial must be set at X position.

Tolerance 1st curtain ——— more than 0.5 ms
2nd curtain ——— more than 2.5 ms

2) FP time-lag

White lead wire in I 300 and the body ground must connect with the synchro-terminals of Shutter speed tester.
Shutter dial must be set at 1/1000 sec.

Tolerance 8.5 ~ 15 ms

57. Diaphragm-shutter synch. time adjustment

Install A100 Front board assy. temporary.
Mount Diaphragm-shutter synch. time checking adaptor DSST-240.
Shutter dial must be set at 1/1000 sec.
Set the mode selecting dial in Shutter speed tester at FP.

Tolerance 36 ~ 49 ms

Adjust it by screwing Set F1.4X4 in 0-B220 Diaphragm-shutter synch. time adjusting plate assy.

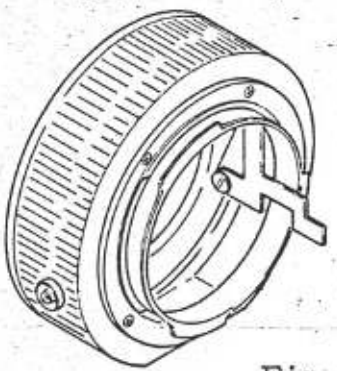


Fig. 120

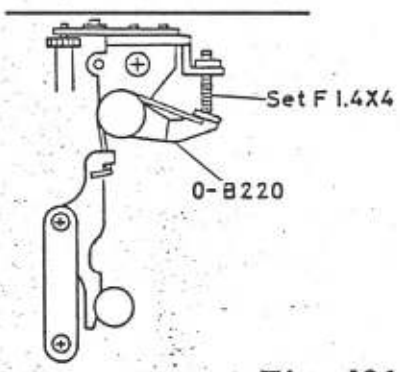


Fig. 121

After adjusted, dismount DSST-240, A100 and Tools 24000K-A401-A.
Take care of the sitting position of camera body, after removed Tools 24000K-A401-A, ——— to prevent Magnet adjustment from getting out of order.

58. T100 P.C. board pattern

° T100 P.C. board pattern *

* Caution when install

a. Do not hook with TV wire located on the side of Mirror housing.
b. Do not touch Photo sensor with your bare finger.

° I 700 MD connector
° CNL-D1.7X2
° CNL-D1.4X2 2pcs. ——— Photo-sensor part
° W3 t=0.4mm Material: Acetyloid
° CNL-D1.7X2 2pcs.
° W3 t=0.4mm Material: Acetyloid ┐
° CNL-D1.4X2 2pcs. ┘— LED part

59. B201 Ground glass mask / LED positioning adjustment

° B201 Ground glass mask —— assembled with L3 Ground glass.

° C-CSS1.4X1.8 4pcs. (PB-G0)

LED positioning adjustment

a. Each LED must align against each figure of shutter speed.

b. LED frame must be installed in parallel with the finder frame.

c. Adjust the position of LED by sliding LED part of T100.

After adjusted, install the rest part of T100.

° D28 P.C. board pattern support collar 2pcs.

° CNL-B1.4X2.8 2pcs.

60. 0-B222 Contact holder assy.

° 0-B222 Contact holder assy. —— include A155 Front board waterproof rubber B *

° CSS1.7X4 2pcs.

* Adhesive position of A155

A155 must be adhered at about 0.1mm higher position than B214 and B215.

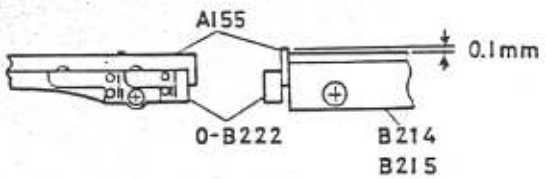


Fig. 122

61. Soldering

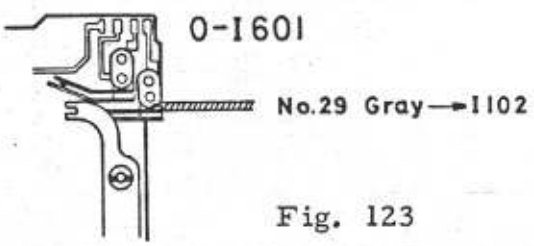


Fig. 123

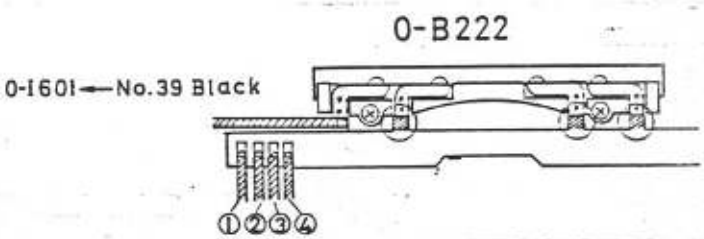


Fig. 124

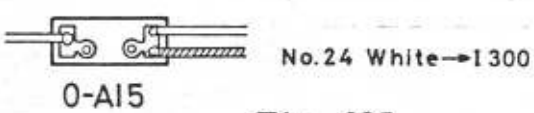


Fig. 125

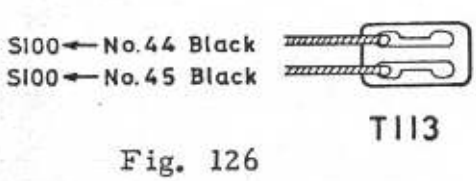


Fig. 126

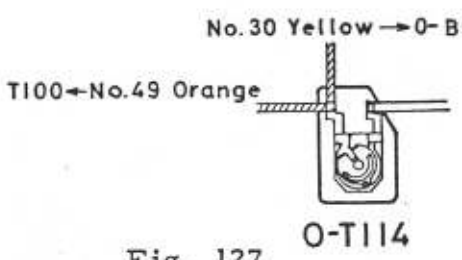


Fig. 127

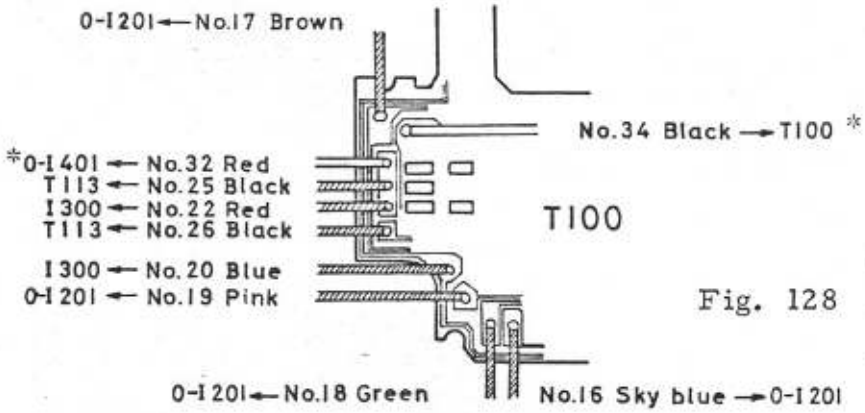


Fig. 128

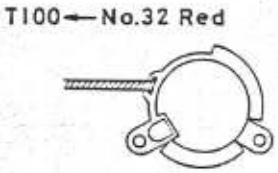


Fig. 129

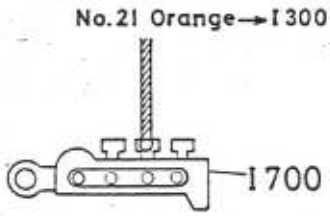


Fig. 130

62. 0-I 401 Battery case assy.
    - 0-I 401 Battery case assy.
    - CNL-D1. 7X2. 5 2pcs.

    Lead wires never be pinched between the body and 0-I 401, when install.

63. Soldering

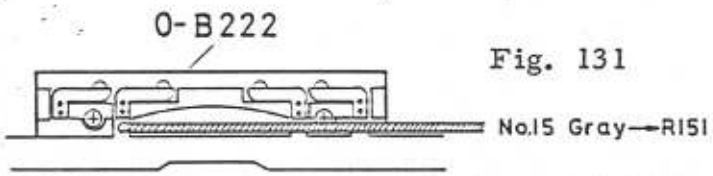


Fig. 131

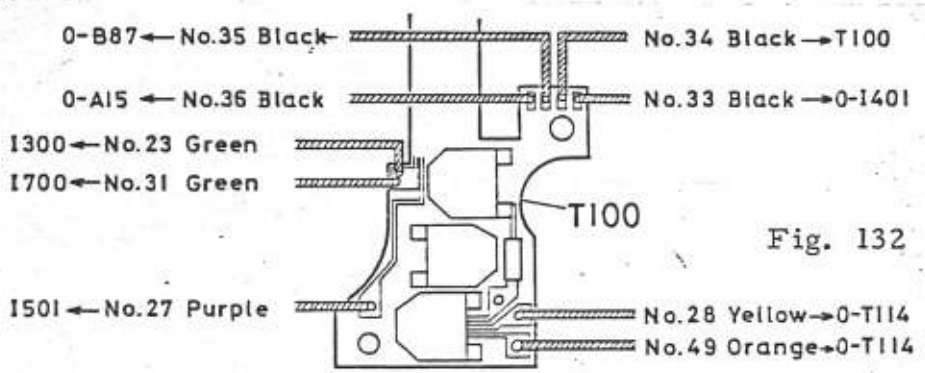


Fig. 132

After soldered, install Tools 24000K-A401-A.

64. R100 ASA volume
    - 0-D9 Exposure compensation coupling cam assy.
    - BO 1. 5 2pcs.
    - R100 ASA volume
    - CNL-D1. 7X3

65. Soldering

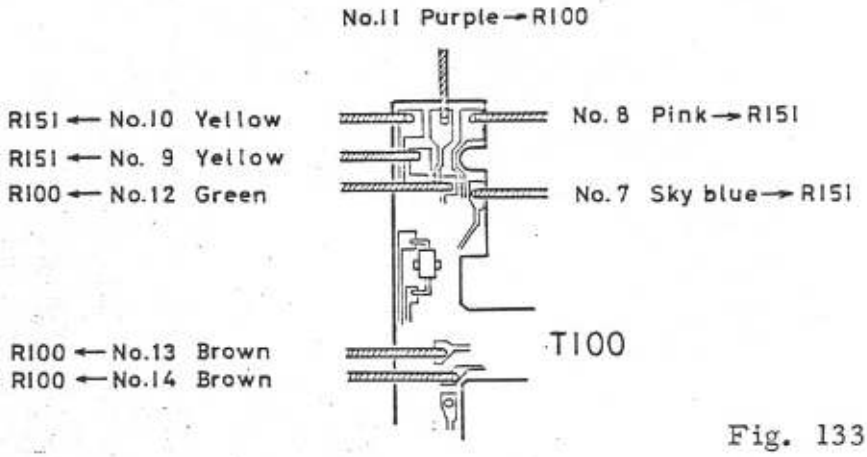

No.11 Purple → R100
R151 ← No.10 Yellow
R151 ← No. 9 Yellow
R100 ← No.12 Green
No. 8 Pink → R151
No. 7 Sky blue → R151
R100 ← No.13 Brown
R100 ← No.14 Brown
T100

Fig. 133

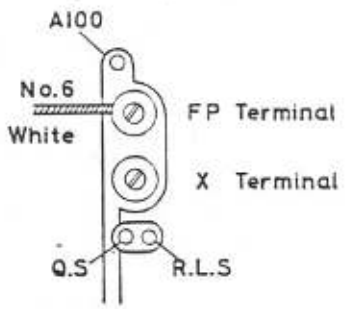


Fig. 134

66. B84 Light seal frame
- B84 Light seal frame
- C-CSS1.4X1.8 (PB-G0) 4pcs.

67. A100 Front board assy. / Mechanical back focus adjustment
- W14 (Adj.)
- A100 Front board assy.
- A113 Front board retainer screw 4pcs.

Mechanical back focus adjustment
45.46 ± 0.04mm
Adjust by W14.

68. Mirror-lock adjustment

Check the function of Mirror-lock up and lock-release.
In case of the defect, adjust its function by sliding Adjusting plate in 0-H000, as follows.

a. The defect of Mirror-lock up.
   Slide Adjusting plate counterclockwise.
b. The defect of lock-release.
   Slide Adjusting plate clockwise.

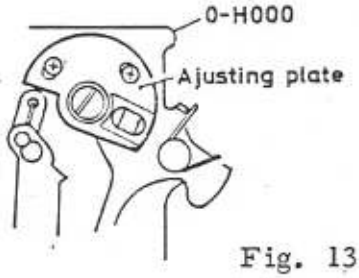


Fig. 135

After adjusted, confirm Release button can push smoothly, without catch.

69. Soldering

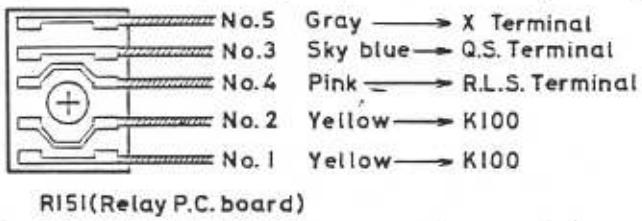


Fig. 136

70. Circuit operation check

Install 0-D12 Exposure compensation switching ring assy. temporary.
Mount Standard lens.
Provide Regulated D.C. power supply.

1) Confirmation of LED position
   Set the voltage 2.8V.
   At ON condition, check each LED position from AUTO to LT.B by changing the setting of ASA, Aperture and/or Brightness.
2) Confirmation of Battery-check
   LED must turns ON and/or flickering at the voltage mentioned below.
   While checking, Shutter rod must keep on to push. (SW P-ON condition)
   2.4V ..... flickering
   2.6V ..... ON
3) Electrical-controlled manual shutter operation
   Set the voltage 2.8V

a. Set the shutter dial at 1/60 sec. And release the shutter.
   Its shutter speed must be about 15.6 ms.
b. Set the shutter dial at 1 sec. And release the shutter.
   Its shutter speed must be about 1000 ms.

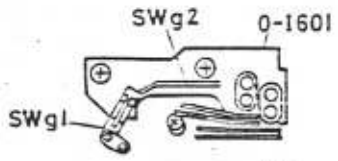


Fig. 137

If does not operate, check the points as follows.

a. Shutter stays open. (Time-exposure)

° Poor contact of SW A-M contact piece in 0-I 251

° Broken wires of TV volume in A0-E201

° Broken wires TV volume —— 0-I 201 —— No. 17 Brown —— T100

° SW gl and SW g2

* SW gl and SW g2

SW gl ——— ° Latch of LED indication

° Switch to AUTO mode at Auto-flash fully charged (OFF)

° Re-set of Auto-flash circuit (ON)

° Re-set of Auto-shutter circuit (ON)

SW g2 ——— At Mirror-up condition, it is necessary that Magnet is energized in advance.
Magnet can not saturate, because the time from SW g OFF until SW T ON is 3 ms.
(Magnet can saturate sufficiently at usual condition, because its time is 30 ms.)

b. Magnet warning operates (Non-proper exposure)

° Mal-function of SW A-M ..... SW A-M contact piece is on the land of mechanical-controlled manual shutter.

° Delay switching of SW gl to OFF or SW g2 to ON.
(Proper switching SW gl OFF ⟶ SW g2 ON ⟶ SW T ON)
In this case, the shutter operates properly at Mirror-up.

° No switching of SW gl and/or SW g2

c. Auto shutter operates

° Mal-function of SW A-M ..... SW A-M contact piece is on the land of auto shutter.

4) Auto shutter operation
Set the voltage 2. 8V

a. Set the shutter dial at AUTO.

b. Set the diaphragm aperture fully open.

c. Release the shutter at darkened condition. Shutter will stays open.

d. And next, change the direction of camera toward the brighter place. 2nd curtain instantly travel correspond to its brightness.

If does not operate, check the points as follows.

a. Shutter stays open (Time-exposure)

° SW gl does not turn off.

° Poor contact of SW A-M contact piece in 0-I 251.

b. Magnet warning operates

° Delay switching of SW gl to OFF or SW g2 to ON.

° Broken wires in R100, and poor contact of R100.

° Short-circuit of the ground in R100

° Mal-function of SW A-M .... SW A-M contact piece is on the land of mechanical-controlled manual shutter.

5) Magnet warning operation

a. Set the shutter dial at 1 sec.

b. Set the voltage 2.1V. And release the shutter.

c. 1st curtain stops to travel, and Mirror seat stays Up-position. At the above condition, it call "Magnet warning".

d. Set the voltage 2.3V. And release the shutter. Shutter must operate at about 1000 ms.

* Operation of Magnet warning

a. When released the shutter, SW g1 goes OFF and Hook of Magnet lever and 0-B91 FP Switch lever assy. comes off.

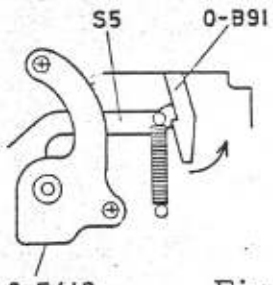


Fig. 138

b. Magnet lever moves downward if Core of Magnet and Armature do not adsorb.

c. E313 Magnet warning coupler lever turns counterclockwise by moving Magnet lever.

d. E310 Magnet warning lever moves inside and hook High-speed pin in 0-E103.

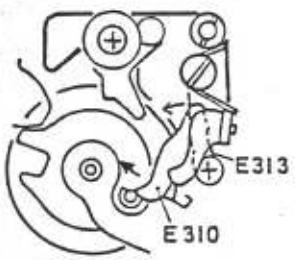


Fig. 139

If does not operate, check the points as follows.

° Defect of T100

° If operate Magnet warning at 2.3V, check a. and b. as follows.

a. Magnet hold is weak —— Defect of S100
Mal-adjustment of S100 position

b. Magnet lever comes off from 0-B91 before SW g1 OFF

° Defect of distributing wires S100 —— T100

6) Flash full changed indication (RLS operation)
Load the batteries G13 2pcs.

Cut 4P synch. cord A —— connection part in the flash side —— to make temporary tools.
Pull out four lead wires from the cord.

Black lead wire ———	PLS terminal	PLS: Ready Lamp Signal
Red lead wire ———	QS terminal	QS: Quench Signal
White lead wire ——	Ground	
Blue lead wire ———	X terminal	

Apply 2.4V to Black and White lead wires. Black —— Plus + terminal

LED of X in the finder must turn ON at this condition.
And also Flash-synch. LED located in 0-B87 must turn ON.

If does not turn on, check the points as follow.
- Defect of T100
- Distributing wires.

7) SW g2 operation
a. Set the voltage 2.8V
b. Connect Circuit tester in series between plus terminal of Regulated D.C. power supply and plus terminal of Battery case, as shown below.
c. Set the measuring range of circuit tester D.C. 25mA
d. Set the shutter dial at AUTO
e. Set Mirror lock-up.

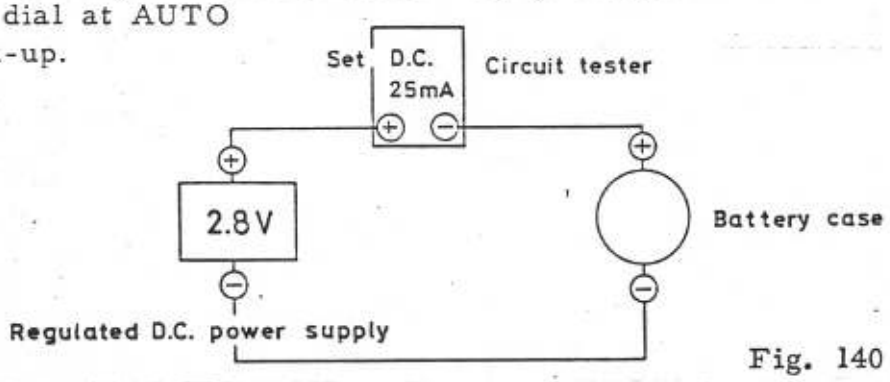


Fig. 140

Magnet must be energized about 13mA at Mirror lock-up (SW g2 ON condition).
Check it at the wound and the released conditions.

If detect about 13mA on the circuit tester, SW g2 operation is O.K.

If does not detect, check the points as follows.
- When the indication was about 4mA —— SW g2 OFF
- When the indication showed short-circuit —— short-circuit of SW g2 contact piece to the body ground.
- Distributing wires

8) Timer operation
LED must keep on about 20 - 30 sec. after Power switch ON.

If does not operate, replace T100.

71. Focus adjustment
Remove B201 Ground glass mask assembled together with L3.
Adjust Focus by screwing B248 Focusing screw, 4pcs.
Tolerance
0 $\pm$ 0.03mm (Adjust as close to zero as possible.)
Mount Finder to check focus.

Re-install B201 after installed.

72. Auto Shutter speed and light measuring adjustment.
Mount F8 set ring for K-series KA-00-1A to the body.
Install Light receiving mask for LX 7PE-M240 * to Light receiving unit of Shutter speed tester 7PE-25A3.
Set the voltage 2.8
* Light receiving mask for LX 7PE-M240

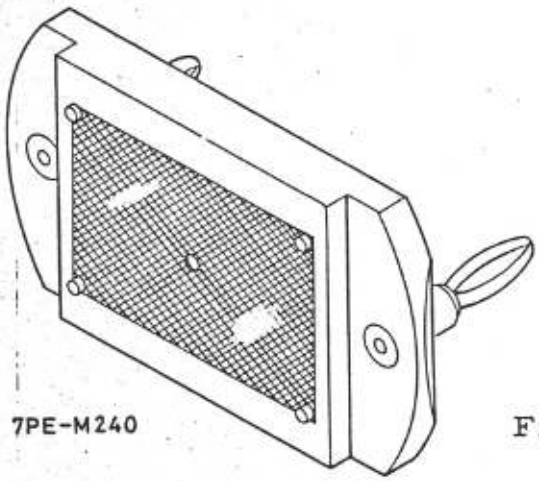


Fig. 141

1) Auto-shutter speed adjustment
Set the diaphragm aperture at F8, ASA setting at 100.

Adjust Auto-speed by VR A and check, in the following order.

a. EV12	15.6 ms
b. EV16	0.98 ms
c. EV16 at ASA 200	0.48 ms
d. EV6 at ASA 100	1000 ms

All of shutter speed must be intolerance.

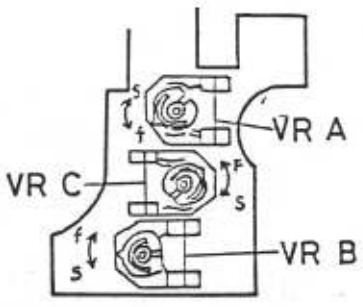


Fig. 142

2) Electrical-controlled manual speed adjustment
Set the diaphragm aperture at F8. ASA setting at 100.

Adjust Electrical-controlled manual speed by VR B. and check, in the following order.

a. Shutter dial at 1/60 sec. 15.6 ms
b. Shutter dial at 1 sec. 1000 ms
c. Check the speeds from 1/60 sec. - 4 sec.

All of shutter speed must be in tolerance.

3) LED indication adjustment
Set the diaphragm aperture at fully open, ASA setting at 100.

Adjust LED indication by VR C and check, in the following order.

a. EV12 LED indication must be 60.
b. LED which already adjusted at a. must not change even if ASA setting change to ASA 80 and ASA 125.
c. EV16 LED indication must be 1000.
d. EV6 LED indication must be 1.

73. 0-A301 Top cover A assy.
Remove 0-C38 Wind lever assy. and 0-D12 Exposure compensation switching ring assy.

° A36 Hinge cover
° 0-A301 Top cover A assy.
° A318 Top cover retainer screw *
° CSS1.7X2.5 (PB-G30)

* Apply G31 to be sealed around the part shown below.
(Not apply G31 to the screw part.)

Fig. 143

74. 0-E224 Shutter speed dial assy.
Set the shutter dial at 1/2000 sec.

° E224 Shutter speed dial cover ring
° 0-E224 Shutter speed dial assy.
° CSS1.4X1.6 3pcs.

Check the function of lock-button, after installed 0-E224.

75. 0-C38
- ° C27 Top cover retainer nut ——— Tools 24000K-C27-A *1
- ° 0-C38 Winding lever assy.
- ° C39 Winding lever retainer plate *2
- ° CNL-B1. 4X2. 5 4pcs.
- ° C40 Cover screw ——————— Tools 23800K-C305-A

*1 24000K-C27-A

*2 Two kinds of C39
(Thickness of plate is difference)
C39-00A t=0. 4mm
C39-00B t=0. 3mm

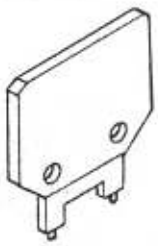


Fig. 144

24000K-C27-A

Check the winding condition and the strongness of pre-advance angle, after installed 0-C38.

76. 0-A351 Top cover B assy.
- ° 0-A351 Top cover B assy.
- ° A318 Top cover retainer screw *
- ° CSS1. 7X2. 5 (PB-G30)

* A318
The same treatment must be done. (Refer to No. 73)

Check the function of Finder lock release button.

77. Rewind parts
- ° A354 Seal ring washer
- ° A353 Seal ring
- ° A355 Seal rubber ring
- ° 0-D12 Exposure compensation coupling cam assy.
- ° D29 Switching ring protector
- ° CNS1. 4X5. 5 3pcs.
- ° 0-D2 Rewind knob assy.

Check the function of 0-D12, after installed.

78. Bottom release restriction
Remove Tools 24000K-A401-A, and install A400 Bottom cover assy. temporary.
Provide Bottom release restriction adjusting Tools 24000N-A503-A*

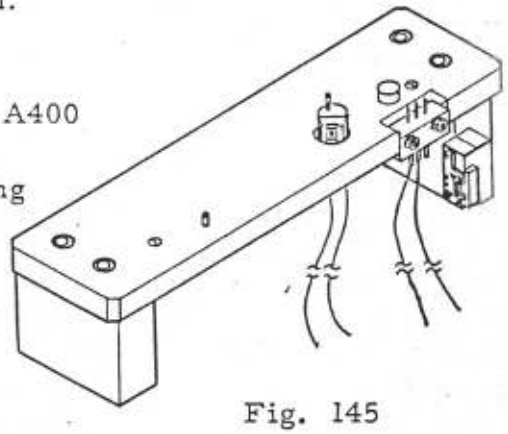


Fig. 145

24000N-A503-A

Mount the body on Tools 24000N-A503-A.

Check the items mentioned below. —— shutter release is restricted by the stud of 24000N-A503-A.

1) Winding can be done under the condition Shutter button depressing on.
2) Shutter can not release even if Shutter button depressed.
3) SW MDT must be ON before Shutter button is restricted to depress.
   —— ON position can be detected by the sound of buzzer.

Adjustment of Shutter button stroke for the release restriction.
Tolerance
0.9 ± 0.1mm from the original position of Shutter button.
Adjust by W6.

Re-confirmation of shutter button stroke, after adjusted the release restriction.

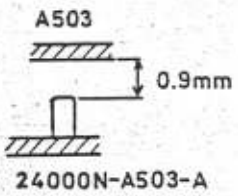


Fig. 146

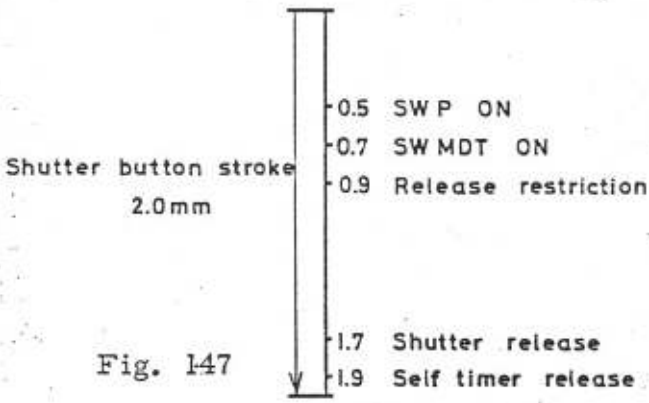


Fig. 147

Remove A400 Bottom cover assy.
Apply red-lacquer at the retainer screws for A505 and A506, and E32 Nut.

79. 2nd curtain switch adjustment

1) Before winding or on the winding, 2nd curtain switch must be OFF certainly.
2) At the wound condition, 2nd curtain switch must be ON certainly.

Shutter can not release by Motor drive or Winder if 2nd curtain switch is OFF at the wound condition.
Motor in Motor drive or Winder does not stop, on racing if 2nd curtain switch is always ON, after the final picture on the roll has been taken.

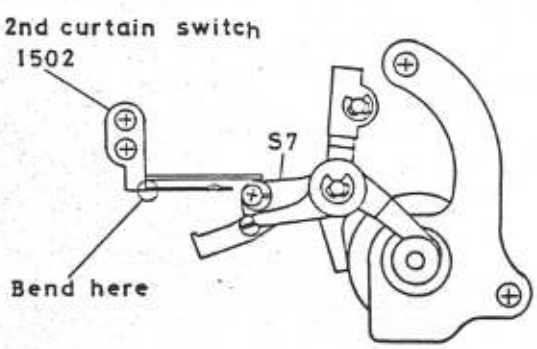


Fig. 148

80. Flash synch. LED adjustment

When use High speed sensitivity film (ASA 1600, ASA 3200), and couple with Flash, the exposure will become eneveness due to delay of light response of the photo cell.
To be better performance at the above condition, give BV-4 of slight light to the photo cell in advance.

Under the condition that the giving of BV-4 of slight light to the photo cell.

BV + SV = TV + AV

BV = TV	+ AV	- SV
-4 = -0.5	+ 3.5	- 7

Mid of 1s and 2s. Mid of F2.8 and F4 ASA 400

1) Install Tools 24000K-A401-A.
2) Set at Mirror up condition, and cover up the photo cell frame located at the bottom of Mirror housing with Black tape to prevent light leakage.
3) Unsolder No. 49 orange lead wire soldered at 0-T114 Flash synch. LED adjusting VR assy.
4) Mount Finder
5) Mount Standard lens and set the diaphragm aperture at middle of F2.8 and F4.
6) Set ASA at 400
7) Install RLS checking adapter RLC-MV into the hot shoe of Finder, or 4P synch. cord A which already cut at the flash end for checking RLS operation.
8) Load Batteries to Battery case.

LED must be ON at X and its exposure when Power switch is ON.
Adjust its exposure indication LED position as indicating the turning point of 1s and 2s by Adjusting VR in 0-T114.

Solder No. 49 orange lead wire at 0-T114, after adjusted.

81. Sealing

Sealing material

SEAL KE 1212 A
KE 1212 B

Locations of sealing are illustrated in the next page.

82. A400 Bottom cover assy.
- A36 Hinge cover
- A400 Bottom cover assy.
- A404 Bottom cover retainer seat 2pcs.
- CSS1.7X1.8 (PB-G30)
- CSS1.7X3 ——— Cassette side
- CSS1.7X1.8 ——— Spool side
- A405 Shock absorbing rubber 2pcs.

83. Cover parts

°	E222	Shutter speed dial rubber ring *
°	A7	Distributing wire cover *
°	A8	Shutter rod cover *
°	A150	Covering A
°	A151	Covering B

* Put Plio-bond to be adhered.

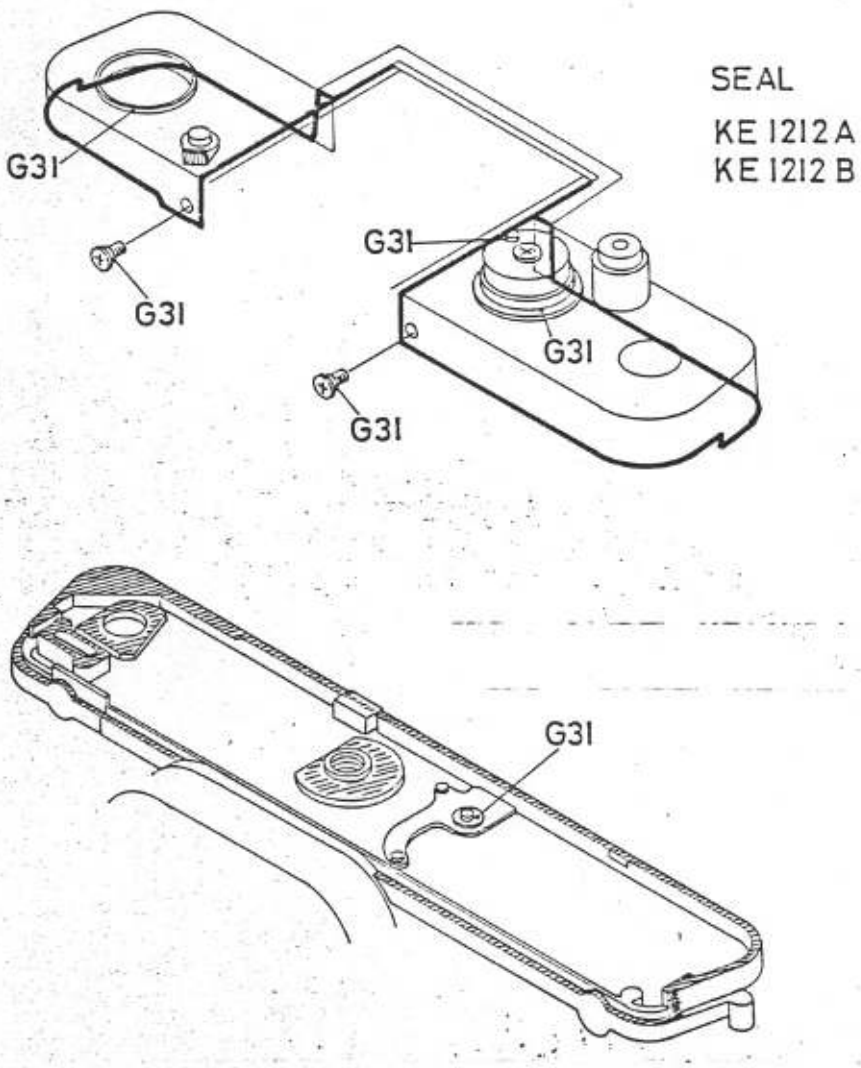


Fig. 149

P.S. 1.

The treatment of A0-E30 Shutter curtain block, and the detail order of assembly.

Caution of maintenance

- Take utmost care of maintenance for the shutter curtains, not to smear, not to scratch, not to bend, not to break, because of the material of curtains is Titanium.
  Check the curtain surfaces whenever install, and replace tham if found breaks, bends, scratches and so on.

- Using only a duck feather, wipe off smears with ether of adequate quantity.
  It is able to wipe with nitro-methane only the place smeared by Aron Alpha.
  (But in this case, much quantity of nitro-methane is not acceptable to use.)
- Curtain which can not wipe off smears by duck feather must be replaced.
- If wipe off by other stuff, curtain surface will be dangerous to change collar.

Order of assembly.

1. Inspection of curtain
   a. Curtain string must be bent at right angle to the curtain edger. (Its part was fixed with Aron Alpha to increase the durability.)
   b. Check curtain surface, not to smear, not to scratch, not to bend and not to break.

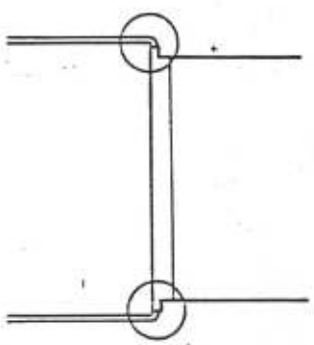


Fig. 150

2. Install A0-E30 Shutter curtain block assy. to the body.
   - A0-E30 Shutter curtain block assy.
   - CNL-D1.7X2.2 2pcs. ——— (SL)

3. Install E3 2nd curtain pinion to A0-E101 and A0-E401.
   - E3 2nd curtain pinion
   - CSM1.4X4 ——— (SL)

4. Install E37 Curtain shaft rest.
   - E37 Curtain shaft rest
   - W2 t=0.2
   - CNSl.7X2.5 ——————— (SL)
   - A21 Curtain shaft rest retainer screw —— (SL)
   - E29 Worm wheel 2pcs. ——— Left-handed screw

5. Give the tension to the both shutter curtains.
   Refer to page 17 , No.14.

6. Install 0-El10 Bottom selector gear assy.

7. 2nd curtain wound position adjustment.
   Refer to page 17 , No.15.

8. Install 0-El03 Top selector gear assy.
   - 0-El03 Top selector gear assy.
   - 0-El08 Top selector gear retainer assy.
   - CSMl.2X3 ——————— (SL)

   Refer to page 18 ; No.17.

9. Remove Tools 24000K-E301-A

10. Install 0-E301 Bounce lever seat assy. and 0-El 1st curtain pinion assy.

* Before install 0-El, the following items must be made.

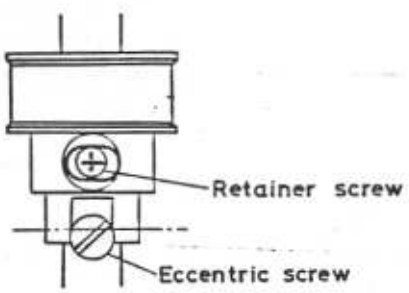


Fig. 151

a. Retainer screw must be in the center of slot to facilitate adjustment.
   Set it by turning eccentric screw.
b. Eccentric screw must be located at bottom half in the adjustable range to facilitate adjustment.

1) Engage Top selector gear and 1st curtain pinion gear at the wound condition. *

* At the wound condition

a. Top selector gear

Fig. 152

b. 1st curtain pinion

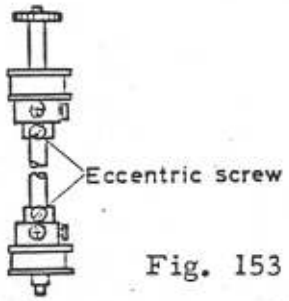


Fig. 153

2) Fix 1st curtain pinion with 0-E301 Bounce lever seat assy.

3) Check vertical plays of 1st curtain pinion.
Refer to page 19, No. 18. 3).

11. 1st curtain released position adjustment.
Set Top selector gear at the released condition. *
2nd curtain must keep on at the charged condition with Tools 24000N-A1, E128-A.

* Released condition of Top selector gear
Refer to page 19, No. 18.

1) Wind up both curtain strings around the bobbin in 0-E1.

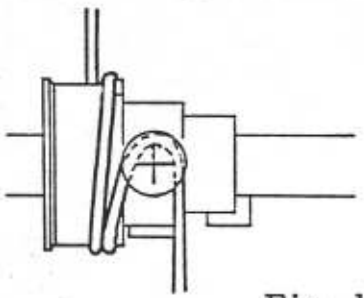


Fig. 154

Wind up, and fasten with retainer screw temporary.

2) By changing the length of string, adjust curtain edger position. It must be located at 0.1mm inside from 5.2mm scribed line.

3) Check the parallelism (edger-to-scribed line, edger-to-picture format)

12. Check edger-to-edger overlapping.
Refer to page 20, No. 20. 4).

13. Install 0-E113 Bottom intermediate gear assy.

14. Install 0-E120 Top intermediate gear assy. / Adjustment
Refer to page 22, No. 22.

15. Adhesive and cut of curtain string.
    1) Release the shutter.
    2) Apply Aron Alpha around the curtain strings to fix.
       (Curtain strings must be placed to the bottom brim of Bobbin forcibly to be wound properly.)
    3) Cut the curtain strings from the place shown below.

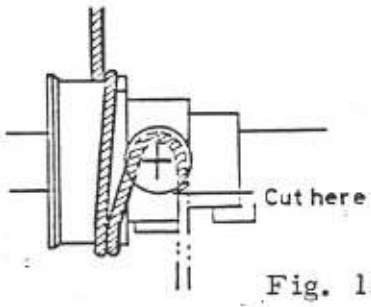


Fig. 155

16. Re-confirmation of 3.8mm overlapping

17. Fitting of Shutter curtains
    Release the shutter about two thousands times, getting to fit.

P. S. 2

Assembly and adjustment of Mirror housing

1. Positioning of B3 Light metering mirror
   Adjust a proper B3 position by moving B78 Light metering mirror stopper, as shown below.
   1) Loose the retainer screw CNM1.4X2 of B78 half-turn.
   2) Position of B123 Light metering mirror light seal A must be adjusted within $0\ ^{+0}_{-0.2}$ mm align with the machined face by moving B78, as shown below.

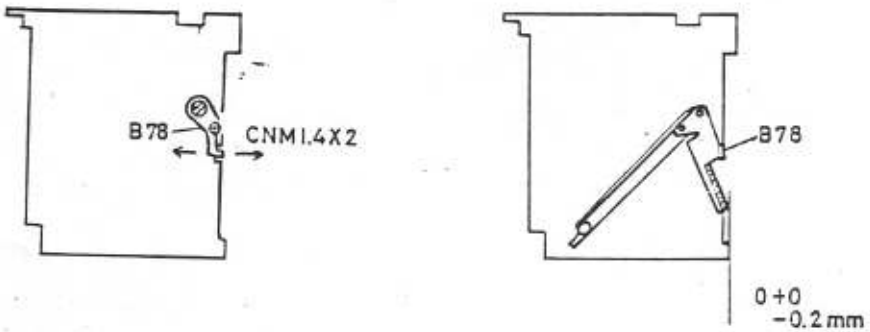


Fig. 156

If the mal-adjustment was made, the following defects are resulted.

- B206 Focusing plate holder does not function well.
- Metering distribution is altered.
- Focus becomes hard to adjust.

Note:
B123 Light metering mirror light seal A must not hang down, to prevent from cutting the picture format.

2. 0-B230 Bobbin driving gear assy.
   0-B230 must be installed as shown below.
   Eccentric screw in 0-B230 must be opposite direction against the mill cut face in B228.

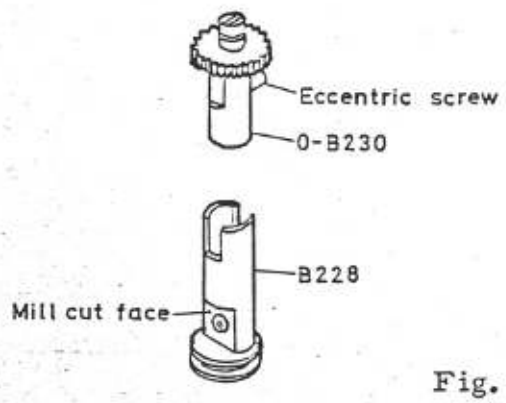


Fig. 157

3. B214 Finder guide A, B215 Finder guide B
B214 and B215 must be installed in parallel, not incline, with Mirror housing.
Measure the width of guide rail by use Tools 24000N-B214, B215-A, go-gauge and not-go gauge.
Adjust by W6.

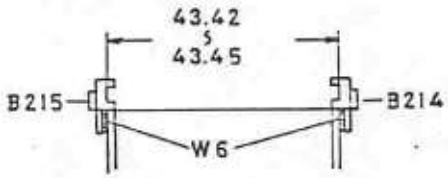


Fig. 158

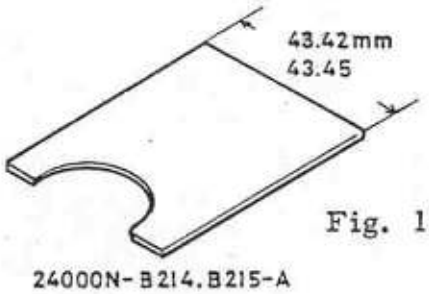


Fig. 159

4. 45 degrees adjustment of 0-B2 Mirror seat assy.
Adjust 45 degrees by moving B80 Mirror seat receptacle retainer plate.
Use Tools 24000N-B2-A to check.

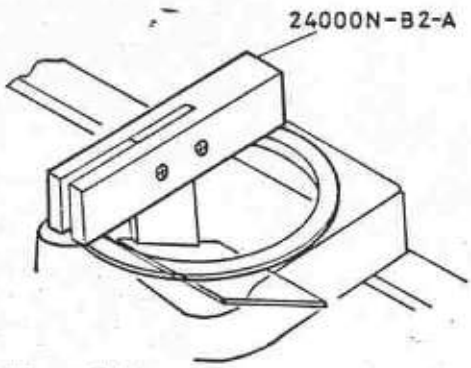


Fig. 160

Fig. 161

5. 0-B19 Mirror flip-up gear assy.
0-B19 Mirror flip-up gear assy. must gear properly with Mirror seat driving gear assy., as shown below.

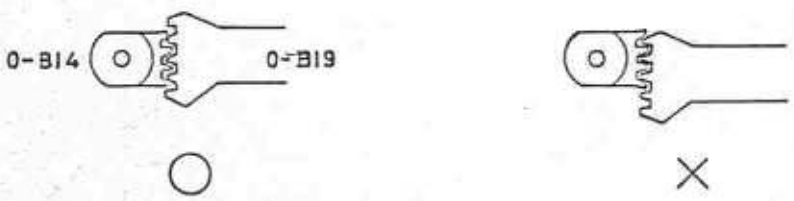


Fig. 162

6. Caution when I 610 Magnet switch contact piece installed.

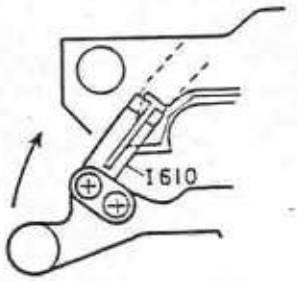


Fig. 163

I 610 must not move along with the land of SW g1 in 0-I 601 Magnet switch p. c. board assy.
Adjust the installing position of I 610 if moves along with.

Note:
SW g1 should turn off af the moment of Mirror housing released.

7. B40 Sub-plate B
Top end of B40 Sub-plate B must not touch with the contact pieces in 0-I 601.
Adjust the clearance of more than 0.3mm between B40 and the contact pieces in 0-I 601 by W1 and W14, as shown below.

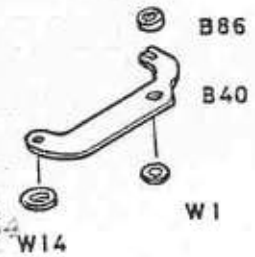


Fig. 164

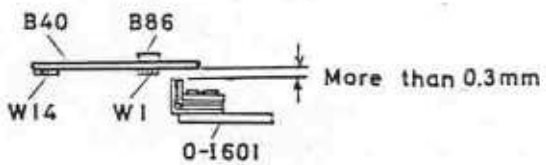


Fig. 165

8. Positioning of B23 Mirror flip-up collar.
At the released condition (Mirror seat flips up completely), the bottom ends of 0-B24 and 0-B232 must have 0.5mm slide differences.
Adjust it by changing B23 Mirror flip-up collar. *

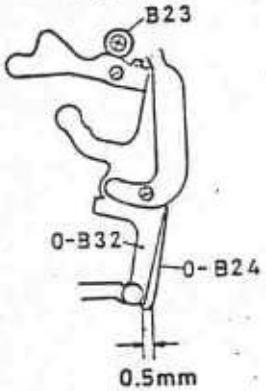


Fig. 166

* B23 Mirror flip-up collar

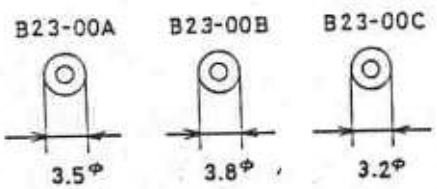


Fig. 167

° If slide difference is too much less,
Mirror seat does not flip up completely.
° If slide difference is too much,
Mirror seat does not flip up when released with Self-timer.

9. Positioning of B110 Restitution stop plate
At the released condition (Mirror seat goes down completely), the clearances between 0-B32 and 0-B58 must be adjusted 0.1 - 0.15mm by sliding B110, as shown below.

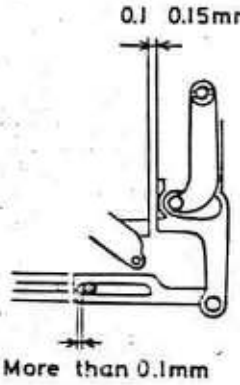


Fig. 168

Fig. 169

Check the clearances between B62 and the slide frame more than 0.1mm.

10. Installation of Match needle string
1) Install B229 String fix plate assembled in 0-B233 Match needle assy. to B228 Bobbin.

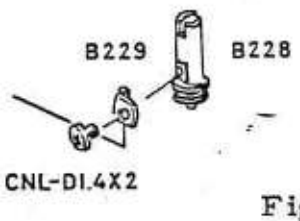


Fig. 170

2) Wind the string 1/3 - 1/2 turn around the roller.
Set the wound string to the upper blim of roller.
Apply Aron Alpha of a sufficient drop on the wound string.

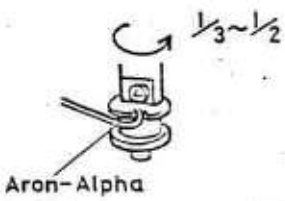


Fig. 171